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INDUSTRIAL AFFAIRS

No. 531

Olympic Construction Progress

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INDUSTRIAL AFFAIRS

No. 531

OLYMPIC CONSTRUCTION PROGRESS

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

CONSTRUCTION PROJECTS FOR THE OLYMPIC GAMES IN MOSCOW

Moscow STROITEL'STVO I ARKHITEKTURA MOSKVY in Russian No 11, Nov 79
p 12-13

[Article by N. Poletayev, correspondent: "Experience on Olympic Construction Projects"]

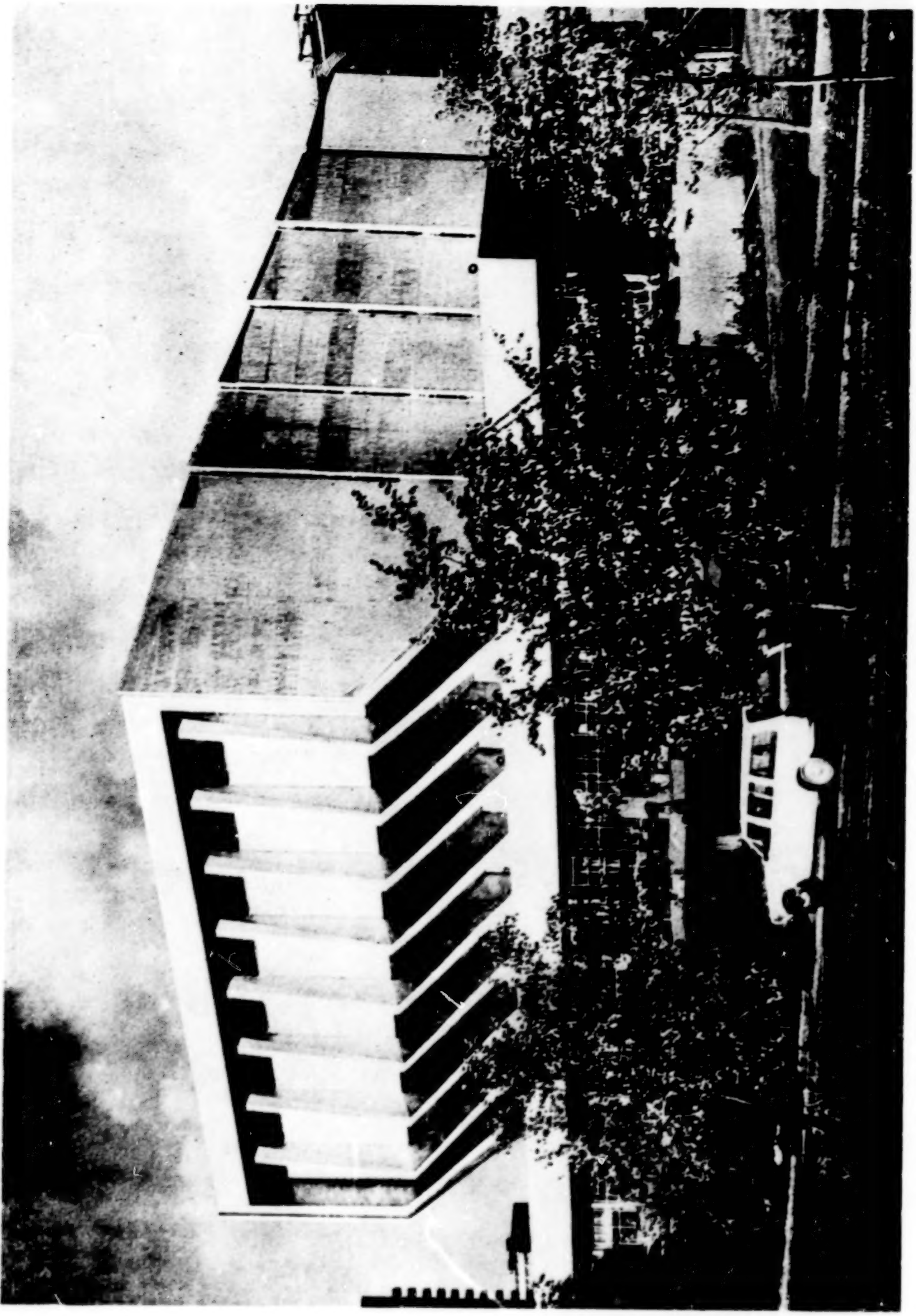
[Text] The construction of the Olympic facilities is a matter of prestige for Moscow's builders. In his greeting to the members of the International Olympic Committee (IOC), the Organizing Committee, and participants in the 21st Summer Olympic Games, General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet, Comrade L.I. Brezhnev remarked as follows: "The Soviet people are now engaged in preparing for the Moscow Olympiade of 1980, and they will do everything to have it take place on a high level, as well as to provide new impulses to the noble ideas of friendship and peace."

The enormous responsibility for getting the city ready for the Games has been entrusted to the capital's planners and builders. They are faced with the construction or modernization of 78 projects. Among these are quite a few unique ones, such as the complex on Peace Prospect, the cycle track at Krylatskoye, the hall for sports games at Luzhniki, and others. They had to be erected within compressed time periods.

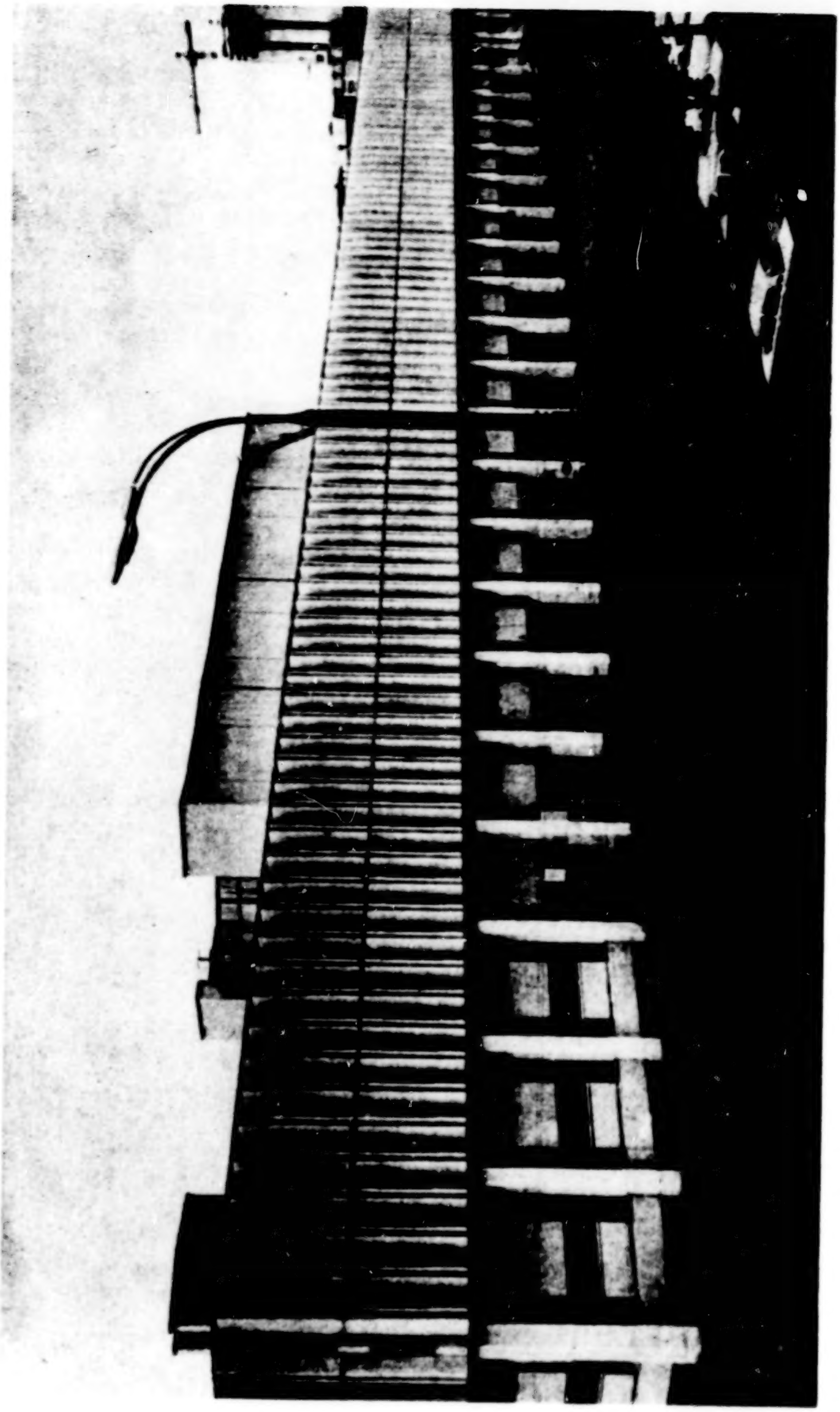
Today, when the construction of the Olympic projects is coming to a close, and many of them have already been put into operation, it may be confidently stated that Moscow's builders have proved that they know how to work rapidly with a high degree of quality and creativity.

The following were put into operation as early as 1978: the "Sevastopol'skaya" Hotel--Building No. 4 with 900 seats and a restaurant, eight apartment houses (two more than the plan), a polyclinic, kindergarten, and school in the Olympic village, as well as the first phase of the stadium in Izmaylovo, the Palace of Sports and the first phase of the swimming pool in Luzhniki, Gosteleradio's service station, and other facilities.

The following buildings are now having their technical equipment installed: the ASU-Olympiad 80 Building [Automated Control System], the automatic telephone exchanges on Zvezdnyy Boulevard, in Troparevo and in the Olympic village; telephone complexes on Samarskiy Pereulok and on Markhlevskiy Street; the intercity telephone exchange on Butlerov Street; and 400 rooms of the television and radio complex.



All-purpose sports hall in Khimki-Khovrin.



ASU Olympiad-80

A series of Olympic projects was put into operation on the eve of the holding of the final games of the Summer Spartakiad of the Peoples of the USSR. Competitions took place in the modernized structures of the Central Stadium imeni V. I. Lenin, the Stadium of the Young Pioneers, on the fields of the equestrian sports facility at Bittsa, on the cycle track, the Rowing Channel, and the archery fields in Krylatskoye. These competitions were broadcast from the studios of the new Olympic television and radio complex.

Quite a bit has been accomplished. And today we can already speak about the over-all significance of the Olympic construction, the scope and importance of the period of preparing the capital for the Olympic Games, as an extremely noteworthy episode in our lives. Ahead of us there is still a great deal of work to do along the path of converting Moscow into a model communist city. Therefore, it is important to single out and utilize in it everything valuable which has been accumulated on the Olympic construction projects.

Indeed there has been a great deal of progressive experience accumulated. It is impossible to describe it in one article. Let us try, however, not to omit the most important thing--that the Olympic facilities had to be built rapidly. So that the builders could proceed to work sooner, the plans for the structures had to be completed within compressed time periods.

The architects of GlavAPU (Main Architectural Planning Administration) and other planning organizations were able to cope with the basic work ahead of schedule. For example, in order to plan such a unique and enormous complex as that which arose on Peace Prospect, five or six years were predicated. The architects and engineers of the Sixth Workshop of the "Mosproyekt-2" Administration finished their basic tasks in two and a half years. Further work could be done in tandem with the builders. In order that the task should proceed more rapidly and on a more closely cooperative basis, the groups of the workshop and the construction design section moved to the construction site. Here, during the course of operations they adjusted the drawings, without thereby altering the basic design solutions.

Thus was found a new form of cooperation and architectural supervision. Together with the builders, the planners labored shoulder to shoulder at the construction site of the Olympic village, at the Central Stadium imeni V. I. Lenin, and other construction projects. We think that the supervisors of GlavAPU will also utilize this form subsequently on the city's important construction projects.

The Olympic projects embodied not only the architects' best ideas. Engineering thought also uttered its own weighty word. The design solutions and plans for operational production were based on up-to-date principles of planning. Metal was concentrated in the basic bearing members of the frameworks. Extensive use was made of high-strength steel and economical shapes of rolled steel. A high degree of technology was provided for in erecting the structural components.

Due to engineering research we succeeded in raising without tower cranes the membrane roof on the hall in Izmaylovo. The substitution of welded beams for wide-strip, rolled iron beams allowed us to curtail by two months the time period required for manufacturing structural components for the swimming pool on Peace Prospect. The abandonment of the monolithic principle in building the cycle track's arches considerably speeded up that facility's erection. The roofing forms for the stadium on Peace Prospect were assembled first on special stands in large blocks, and it was here also that the ventilation ducts were installed. Such a completed block-unit was hoisted up by two cranes.

Similar examples could be cited further. It is undoubtedly true that the methods of operational production discovered in the process of Olympic construction and engineering innovations will enrich the construction process.

Without a creative attitude toward the work people can scarcely succeed in coping with the tasks at hand. It is gratifying that active research at the Olympic construction projects was joined by Party construction project organizations, engineers, architects, and workers.

The Olympic construction projects were the first to introduce on such an extensive basis such a form of active influence on the course of operations as integrated staffs and Party committees. They aided in linking together numerous organizations participating in construction, in creating groups of like-minded persons, in mobilizing them to solve complex problems, and in organizing effective socialist competition. Such staffs and Party committees are functioning in the construction of the complex on Peace Prospect, in Luzhniki, in the hotel complex in Izmaylovo, as well as in the television and radio complex, and the Center for International Trade.

New forms of Party influence on the course of construction have been found. Thus, in March of the present year the Party committee and the staff of the television and radio complex, in conjunction with the GSMO-1 Party committees, the All-Union Scientific Research Institute of Television from Leningrad, the Party Bureau of Services to Clients, and the Council of Secretaries, examined the question "On the Personal Responsibility of Management Supervisors of Construction Administrations for Guaranteeing to Turn Over Production Areas for the Installation of Engineering Equipment." The director of the All-Union Scientific Research Institute for Leningrad and the supervisors of OTRK delivered substantial reports. Invited to this session were the chiefs of construction and specialized administrations, section chiefs, the secretaries of shop Party organizations, and Party group organizers. And it must be noted that the invited, middle-level supervisors, after they had received complete information about those areas which they were building, what they are intended for, what kind of equipment will be operating in them, and what their cost will be, were permeated with a feeling of responsibility for the time periods and the quality of the work being performed by them.

Such an effective form of socialist competition as the adoption of joint pledges has been extensively utilized. For example, 80 groups of organizations--participants in the renovation of Luzhniki--discussed their obligations for 1979 and unanimously decided to prepare the structures of the country's main stadium for the Summer Spartakiade of the Peoples of the USSR. It is necessary to note, in particular, that thanks to the joint pledges, clients and users were successfully drawn into the process of construction.

Thanks to such a state of affairs, the builders fulfilled all the requirements of the directors of the Palace of Sports in Luzhniki: they prepared the building so that figure-skating competitions could be held, then for the World Ice Hockey Championship, and finally for the Summer Spartakiade.

The creation at the city's major construction projects of integrated staffs and Party committees has allowed extensive use to be made of everything valuable and progressive which was found in the Olympic construction projects. In particular, they exerted an extremely significant influence on the preparation and training of personnel.

The Olympic construction projects became a school for the mastery of skills and management for many young workers. Now widely renowned, for example, is the brigade of A. Sviridov from the Mosstroy Trust No. 31. But it was created only three years ago from very young persons, each of whom was a graduate of the ten-year secondary school without any construction skills whatsoever. This group proceeded to the construction of "G" building of the hotel complex in Izmaylovo at a time when the other buildings had already made notable progress. The gap in time amounted to a year and a half. But within two years A. Sviridov's brigade had overtaken its neighbors--so rapidly did these young persons grasp the secrets of skilled mastery. This brigade included in its ranks the cosmonauts Yu. Romanenko and G. Grechko, when they completed their many days of flight, and to this day it has fulfilled its norm for them.

Brigade-leader M. Gagarin from the Stal'montazh Trust included in his group graduates of vocational-technical schools, and after a short time he was able to convey to them a large portion of his own experience and to inculcate in them the laws of a worker's conscience. Quite a few such mentors made their appearance on the Olympic construction projects. Their experience must become the achievement of everybody.

And speaking about positive lessons, here is something else that has to be mentioned. In the construction of the Olympic projects all the workers in the capital are taking an active part. Staffs have been created in many Party raykoms, and interesting methods of work have been discovered. In the Pervomayskiy Rayon, for example, 120 industrial enterprises, along with scientific-research and planning institutes have concluded an agreement on creative cooperation with the builders. In fulfilling its pledges, an automatic heat plant has manufactured for the builders of the hotel complex in Izmaylovo pneumatic guns for sealing up joints, while the All-Union Scientific Research Institute for Tools has manufactured a tool for cutting asbestos-cement channels.

The contribution of each enterprise of the rayon to the construction of the Olympiad -80 projects is reflected in personal accounts. In Dzerzhinsk, Leninsk, and other rayons there has been widespread support for the initiative shown by the progressive labor groups--each one must contribute 8 hours of work on the construction projects and facilities. Preparing the capital for the Olympic Games, as well as converting it into a model communist city is a matter with which every Muscovite is concerned.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

OLYMPIC CONSTRUCTION PROGRESS REVIEWED

Moscow ZHILISHCHNOYE STROITEL'STVO in Russian No 10, 1979 pp 28-29

[Article by V.G. Trofimov: "A Chronicle of Olympic Construction Progress"]

[Text] On the eve of the Seventh USSR People's Spartakiad a press conference for Soviet and foreign correspondents was taking place in the Central Stadium imeni V. I. Lenin. It was noted that Moscow has carried out an immense amount of work enroute to a model completion of preparations for the start of the 1980 Olympics. Even a year before the opening of the 22nd Olympic Games sportsmen from many countries of the world were given a chance to "test" a number of Olympic sites in Moscow. As it might be supposed, the USSR People's Spartakiad presented an opportunity for a good general rehearsal of Olympiad-80.

Here are several statistics. Twelve thousand athletes in 30 different sports were participants in the final contests of the Spartakiad. For the first time at a Spartakiad more than 2,300 foreign sportsmen from 84 countries all over the world made appearances. No single country or city previously holding the Olympic Games organized such a gigantic experiment.

A number of structures have been put into service. These are the future Olympiad Center--the Bol'shaya sports arena in Luzhin where the solemn opening and closing of the Spartakiade took place--the reconstructed Army Central Sports Club soccer and track and field complex and the reconstructed rowing canal in Krylat. In all, 11 future Olympic arenas accepted Spartakiad participants.

Work on structures designed for other purposes is either finished or being completed. The automated control system for the Olympiad, located in a special building in Luzhin was partially tested during the days of the Spartakiad.

The "Kosmos" hotel and three buildings of the "Sevastopol" hotel have been put into service. Reconstruction of the "Yaroslavskaya," "Kievskaya" and "Tourist" hotels has been completed. A great deal of work in improving the territory adjoining the hotels is going on. Much is being done to introduce new techniques and modern equipment in hotel management to improve the reliability of the work of engineering systems.

The Olympic Complex in Luzhin

A state commission approved its use after reconstruction went on for several days prior to the opening of the USSR People's Spartakiad. Each of the structures of the complex are a combination of bold architectural concepts, accurate engineering calculations and high construction mastery.

The Bol'shaya sports arena was completely renovated. The northern sports center was reconstructed and the southern sports center built with a tartan covering. A field was built for discus throwers that is modern in form. It is equal in area to three soccer fields. Construction workers replaced the arena's roof, which has an area of 65 square meters. It is now finished with prestressed reinforced steel concrete. The rooms below the stands were replanned and refinished. They now number 900.

On the first floor under the stands are warehouses, a riding school, post office and telegraph office. The second floor is set aside for passageways, lobbies, snask bars for spectators, and a museum. Along the entire ellipse of the third floor are 14 halls with 2 tiers of windows having a height of 6 meters and an area of 24 by 12 meters each. Volleyball and basketball players, gymnasts, weight lifters and wrestlers train here. The "Rekord" movie theater, "Luzhnik" and "Olympiad" retaurants and press center are located on this floor. It has 44 telephone booths, computing and multiplication machines available.

On the next floor are the "Sport" hotel rooms and quarters for the medical-sport dispensary. And still higher, under the highest part of the arena, is a corridor with a glass wall and television and radio commentators'booths.

It would not be an exaggeration to say that only the old walls remain in the Bol'shaya sports arena. It is hard to recognize the spectators'stands. They are covered with marble, colored concrete and aluminum.

Alongside of the arena four giant lighting towers have been raised. They provide the necessary lighting for color television broadcasts.

Yet all the same, specialists consider the chief feature of reconstructed Luzhin to be the unusual saturation of the entire complex with engineering "fillings."

Glavmosinzhstroy construction workers have reconstructed the entire underlying engineering network and all of the vital arteries.

Work has begun on the regional information computing center under the west stands. It is part of the automated control system. Among its tasks are collecting and processing judges'decisions and issuing documentation for sporting contests. For these purposes two computers and special input mechanism-display modules have been installed here.

Among the many engineering networks are the gas pipeline and bowl which contains the flame. It gests its start at Desyatiletiya Oktabrya Street and stretches for 1.5 kilometers along Frunzen rampart, goes under a railroad bridge and, entering the Bol'shaya sports arena, climbs 37 meters to the bowl. The bowl holding the flame at the Spartakiad had a diameter of 4.5 meters, a height of more than 2 meters, with a power of 500 cubic meters per hour. The bowl will be replaced by a larger one for the Olympic Games.

Road crews completed a significant amount of work as well. They laid new asphalt surfaces with an area of 500,000 square meters and laid 35 km of boulders bordering roads.

Eight fountains located on the territory of Central Stadium imeni V. I. Lenin were refurbished by specialists of the SU-37 [Construction School 37] trust for construction or river embankments and bridges. New electronic equipment with automated controls was installed here, approximately 1,500 meters of steel piping were laid and the hydraulic system and granite facing of the fountains were refurbished.

Thus, on a large and small scale, care is being displayed in the creation of the sports complex bearing the name of V. I. Lenin--the center of the future Olympiad-80.

It is true that reconstruction work has applied to other structures of the complex as well. The swimming pool was refurbished, the Sport Palace reconstructed, the roof of the Malaya sports arena re-covered, and the general purpose sports hall "Druzhba" was erected. This unique structure is reminiscent of the overturned cup of a lotus flower. Specialists from MNIITEP [Moscow Scientific Research Design Institute of Norms and Experimental Planning] worked on the construction of the "Druzhba" hall with participation by collaborators from the USSR Gosstroy's Scientific Research Institute of Concrete and Reinforced Concrete. Workers from the Stal'montazh Trust assembled the hall.

The main arena, with a dimension of 42 by 42 meters, is surrounded by stationary stands along the entire perimeter on the second and third tiers. A special structure with movable stands has been assembled in the hall. Together with these stands, the hall holds up to 4,000 people.

The construction of the floor is interesting. It was made from tightly fitted ship beams which required special treatment and soaking. The arena is covered above with a special synthetic carpet resembling "turf."

Construction of the suspended ceiling was uniquely done. It is embedded with a concrete honeycomb in the form of a cupola and the original pattern of the structure at the upper part is not covered by the coating itself.

It remains to be added that 12 types of sports contests may be conducted in this hall.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

RECONSTRUCTION AND RENOVATION OF OLYMPIC STADIUM

Leningrad STROITEL'STVO I ARKHITEKTURA LENINGRADA in Russian No 11, Nov 79 pp 36-39

[Article by S. P. Odnovalov and M. V. Tsimbal, architects]

[Text] The enormous stadium, with capacity of almost 100,000 spectators, was literally raised from the bottom of an enormous marine sand hill. Its outer slopes are green terraces with wide stairs leading to the top. From here a view opens up on the spaces of the Gulf of Finland and the city approaching it. Below, the gigantic amphitheater of the sports arena is located in the crater of the hill.

The Stadium imeni S. M. Kirov won the hearts of Leningrad residents immediately and for always with its unusual character and beauty. It became one of the sights of the city and an object of its pride. It was no accident that the lot fell to it to receive the participants of the soccer elimination tournament on the playing field for the 22nd Olympic Games of 1980.

In this regard the question arose of reconstruction of the stadium, which was dictated by the need to both renovate the considerably worn structure and by the requirement of bringing it into total agreement with modern conditions and requirements of international competitions of the very highest class. The goals and tasks of the planned reconstruction have already been discussed in the magazine (see "The Construction and Architecture of Leningrad," No 7, 1979).

The significant renovation of the stadium inevitably resulted in specific changes of its ordinary face. And the primary duty of the architects who took the baton from the developers of the glorious sports structure of Leningrad was not to disturb its architectural features if possible and to conduct the operation especially delicately. According to this understanding of our task, we also attempted to carry out all the reconstruction work. And one can now judge already what it has been possible to achieve in full scale.

View of the Main Entrance

If one may rephrase the well-known saying that "the theater begins with the coatrack," then the stadium probably begins with the ticket offices. It is here that the fans gain the first impressions about it. Not only are tickets sold at the entrance and people attempt to acquire "extra" tickets, but the chances of the teams are discussed and sports news is exchanged. Therefore, the area in front of the enormous stadium should be sufficiently large and impressive.

The ticket offices were previously located near the streetcar traffic circle and on the central avenue of Primorskiy Victory Park in numerous small wooden kiosks. There are now capital stone pavilions instead of them.

The pavilion near the streetcar stops forms a passage in the form of four ellipsoidal pavilions covered by an arched structure, in each of which there are five ticket offices each. The walls are covered with "broken" putilov tile and the arch is covered with smooth saaren tile. The architectural face of this structure is interpreted as a festive entrance into a park. Its central passage leads to a memorial zone, to a stele in honor of laying the Victory Park here in 1945. On both sides are supporting walls with information tables, flower sellers and benches. The path toward the stadium is noted by a decorative composition of three flagpoles joined by a "gold ring." To create the impression of unity, it is faced with natural stone and is located opposite the streetcar pavilion.

Up to 30-40 percent of the spectators walk from the streetcars to the stadijm. Their main course follows the central avenue of the park. Here the main entrance was also changed by construction of two additional ticket office pavilions made into a unified whole. These are separately standing right-angled spaces with narrow windows and large circular glass covered by an arched roof.

Whereas the ticket office pavilions flank the area of the main entrance, the "reception platform," to which leads three granite steps, rises in its center. It is planned to install a sculpture composition there in honor of the arrangements made in Leningrad for the Olympiad-80. Along the sides of the platform are groups of flagpoles, at the base of which are the three-dimensional elements of the stands of the Olympic symbol.

All this taken together prepares visitors to perceive the central stairway leading to the stadium. The bowl of the Olympic flame is installed on its axis at the top of the hill. It was raised to a height of 12 meters above the level of the upper pedestrian terrace. This was dictated not only by safety conditions (after all, a giant gas torch burns among a large accumulation of people!), but also by aesthetic ideas so that the bowl with the flame is visible from all spectator seats and far approaches to the stadium. In combination with the spouting water of the cascades flowing along the central stairway and with the multijet fountain near its base, the entire composition will seemingly symbolize the "union of fire and water."

The means of this combination is in the stadium architecture itself and has something in common with the initial idea of Academician of architecture A. S. Nikol'skiy on organization of the main entrance. It was here that he proposed that a high tower be erected as a silhouette dominating the entire sports-park complex. The Olympic flame will perform to some extent the functions of an unrealized completion.

This determined the direction of the first search of graphic solution of the bowl, which proceeded from analogy with shapes made in full scale and recorded in numerous drawings of Nikol'skiy. However, during the work the face of the lamp for the Olympic flame was realistically determined in its more appropriate designation of classical forms. That is why it is made in the form of a torch with a cup up to five meters in diameter. An ignition device is provided near the base, to which sportsmen with a traditional baton torch ascend. The "running fire" will rush upward along three paths along the handle of the torch and, having penetrated special openings to the gas burners, will burst out in a large flame that will burn during the entire time of the Olympics soccer tournament.

The decorative face of the torch was made of aluminium anodized under light bronze. Together with the new bronze statues of athletes on the terraces of the central stairway, the torch should have a limited effect on the architectural ensemble of the main entrance. After the end of the Olympics games, it will also triumphantly illuminate sports festivals and other mass public events at this stadium of our city.

The most fundamental in reconstruction of the Stadium imeni S. M. Kirov is installation of artificial lighting of the sports arena. A given technical problem is solved in each specific case in close cooperation with the face of the stadium and the panoram of the city, but it also requires installation of separately standing supports with banks of spotlights. These supports were made as one-piece structures inside which all the engineering and operational communications are located in Moscow at the Olympic Stadium imeni V. I. Lenin. The light poles at the stadiums of Kiev, Minsk and also at the Leningrad Stadium imeni V. I. Lenin are reticular and welded of steel pipe.

The following parameters were determined according to lighting engineering calculations for the Stadium imeni S. M. Kirov: the number of poles is four, their height is up to 70 meters, their location is opposite the corners of the playing field and the number of lights is 136 on each pole. However, it must be said that when calculating the lighting, specialists of VNISI [All-Union Scientific Research Institute of Illuminating Engineering] (Moscow), we feel, assigned an excessively high reliability factor equal to 1.8 for all the Olympic objects. We had to find, according to the mission, a graphic solution to these specific structures within the stadium setting.

We wanted them to be associated with ship masts, which is more appropriate to a sports complex located near the sea. And in the final architectural development of the engineering part, carried out by the Leningrad Department of the Proyektstal'konstruktsiya Institute [State Institute for the Planning, Research and Testing of Steel Structures and Bridges], the poles, as we see it, do remind one of the mast of a berthed ship with the sails furled on the yardarms--rows of aluminum spotlights.

Each of the masts is a vertical steel support pipe of the smallest possible diameter (2.7 m) permissible under conditions of stability and strength and mainly which provides arrangement of the necessary functional communications lines in it. The light surface which carries the searchlights is resolved in a vertical composition and is somewhat convex toward the arena, by which the association with sails is again emphasized. And the light gray paint of the poles visually opens their outlines in the haze of the marine landscape.

The stadium on the shore of the sea has now been completed, having become a part of the silhouette in the city-building surroundings. During the part 25 years of existence of the large hill, which never dominated the flat shores of the Gulf, "was drowned" in the rising crowns of the trees of the park tract. Now walking along the shady avenues of the park, it is difficult to even guess than an enormous sports structure is nearby. Only the central avenue, piercing the park like an arrow, leads to the main entrance, the visual reference points of which, visible from afar, have become the gigantic mast with their silvery sails.

The problem of engineering support of the artificial lighting of the sports arena was also rather complicated. The fact is that the power consumed by each pole requires an independent transformer substation. The first idea of placing these substations beyond the hill was unfounded since it would require laying of passageways up to 300-500 meters long. To place the transformer substation in the immediate vicinity of the poles meant to disturb the park beauty of the stadium.

It was decided to build the substations into the side of the hill, making them underground. And already completed in full scale, they look like caverns formed by entrances with support walls of natural stone and lattice gates. Inside is a rather vast distributing room from which two paths lead to the transformer chambers and a third to the panel chamber. The lighting support pipe serves as a ventilation shaft for them. Thus, it was possible to inscribe clearly technical structures within the overall ensemble.

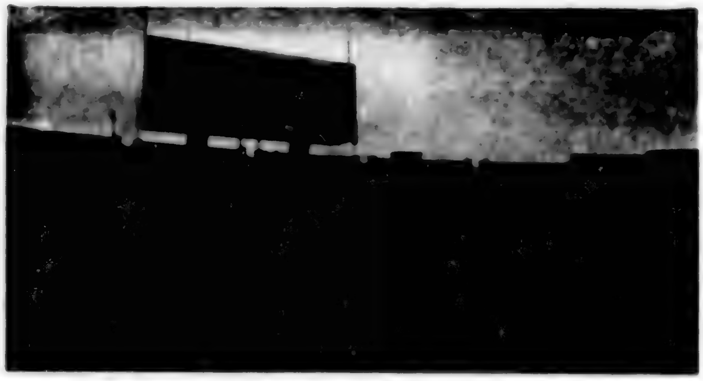
It is worthwhile in this regard to mention the new constructions for the engineering communications such as the electric feeder substation and the pumping station of the drain sewer. The buildings for them are constructed on the basis of typical plans, but they have acquired the form of park pavilions due to reconstruction of the facades.

The disposition of the janitorial facilities caused considerable difficulties. We preferred to locate them near the southern road on the longitudinal axis of the large parking areas which appeared here according to the conditions of the Olympiad-80. The overall architectural solution of this structure presents it as a unified block around a large inner courtyard to which the gates of the garage, workshops and warehouse buildings open. The two-story end facades of the building are resolved as the main ones. They impart a park nature to it by their balcony entrances on the first floor and by the large windows on the second floor. Since the janitorial facilities were always an object of second priority of construction, its creation according to the Olympic program of reconstruction work can be regarded as the beginning of implementation of future plans.

Finally, what will visitors see new at the reconstructed sports arena? It has been changed a lot due to the fact that it is now better equipped and larger scale because its visual perception focuses on the verticals of the lighting poles. Quite recently seeming to be excessively cumbersome and small-scale, the volumes of the electric information boards are now perceived as components which completely correspond to the overall composition of the stadium.

The sports field itself also appears new. The grass cover of the soccer field has been renovated. The track zone, laid out according to the newest requirements, is covered by a bright synthetic cover of novaton.

The appearance of the spectators' stands was changed. Time-eroded rows with asphalt cover have been replaced by steps of monolithic reinforced concrete which provides strength and durability to them and waterproofing to their base. At the same time similarity to the classical severity of ancient stadiums, to which the geometric clarity of outline of the rows and the restrained gray color of the concrete contribute, appeared.



Amphitheater of Sports Arena With Stands

Attachment of the new seats is distinguished by simplicity in installation and low metal consumption. Installation of supports leaves the area under the seats free, which permits mechanization of cleaning. Great attention was devoted to the visual graphics of the stands, perceived by the viewer from any point as a geometrically clear drawing of sections opening from bottom to top, in installation of the seat supports. The seats are made of durable larch sent from the Siberian taiga. The barrier around the arena has been increased in height according to the new marks of the spectators' rows.

The upper barrier above the stands has also been completely renovated. It has been raised somewhat. A large number of recesses for low-current devices has been made in it. Facing the outer surface of the barrier and stands near the passages to the sections with natural stone gives them an impressive appearance.

It is impossible not to note yet another innovation in the architecture of the western stands of the stadium--the space built into it for the information and technical service control center of the stadium and also for presentation boxes. The former locally developed box with commentators' booths added to it at some time, this new space was a very complicated structure.

The large and different complex of buildings provided here had to be located inside the hill with the least possible loss of spectators' seats. Hence, it was decided to create two levels and to go underground with rooms which do not functionally require direct visual communication with the arena, inside the embanked hill.

This built-in configuration is a row of boxes for representatives of the International Olympic Committee, employees of the diplomatic corps and the press. For increased comfort, the boxes are covered with a bubble which is cut by a part of the second level protruding like a garret. Two groups of glazed booths for commentators, announcers and operators of the information boards are located here. In the center is an open box for honored guests, connected by an inner stairway to the complex of the lower floor and by a tunnel leading to the outside of the hill.

A large hall-lounge with bar and teletype booths for intercity and international telephone communications are located behind the boxes. Up to 100 persons simultaneously can be comfortably arranged in the large hall, which permits its use for press conferences. The technical services of the radio and electric support of the stadium are located in the interior of both levels under the spectator stands.

The length of the built-in complex along the west stands is surrounded by four sections and "takes away" 36 vertical rows. The remaining rows are as before made available to spectators, with the exception of the last 4-5 rows where installations for temporary comentators' booths and also booths

Arrangement of Spectators' Seats

for the television photo and advertisement center are provided within this same front. The entire complex serves as an architectural accent of the western stands.

Significant changes have also been made inside the sports pavilions flagging the central stairway. Installation of the subpress center of the Olympics and also a medical center is provided in the first of them. Reconstruction of the building according to this required extensive work up to dismantling of the inner major walls and roofs. The stadium's sports club will move here after the Olympiad-80 and the medical center will expand its functions, having become a recovery-rehabilitation center. Much new has also appeared in the second building, where as before the athletes' dressing rooms are located. Saunas with pools and also rooms for physical preparation and warming up of the soccer players were created there. The radio broadcasting service of the sports complex is located in the third building and a fast-food cafe has been created on the third floor. The fourth building has been made available to the administrative-service facilities of the stadium.

A little more than six months will pass and the Olympic flame, announcing the beginning of the soccer tournament, will be ignited on 20 July 1980 over the Stadium imeni S. M. Korov.

Festively decked-out Leningrad will triumphantly meet the participants and guests of the Olympiad-80 and thousands of fans will greet the soccer players of four countries who will play the games of the elimination tournament quarter final. Of course the spectators will include those who lived with our main stadium for four years, renovating and rearranging it so that it rightfully receives the honorary rank of an Olympic stadium.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

STADIUM CONSTRUCTION IN MOSCOW

Moscow STROITEL'STVO I ARKHITEKTURA MOSKVY in Russian No 11, Nov 79 p 11

[Article: "Reporting From the Construction Sites"]

[Text] Stadium on Peace Prospect

The all-purpose, enclosed stadium with room for 45,000 spectators which is being built in the region of Peace Prospect is a unique structure with solutions which are new in principle for its equipment and conversion. It has been designed not only for training and competitions in the most diverse types of sports; extensive sports, cultural-spectacle, social and hygienic-recreational programs will also take place here.

Construction is proceeding at an increasingly stepped-up pace. At the same time work is going forward on the engineering equipment and on clearing the surrounding area. The precisely expressed driveways and passenger approaches for the spectators to take from the subway stations to the sports complex, the carefully thought-through distribution of parking areas for motor vehicles--all this must take into consideration the intersections of pedestrian flow patterns and motor-vehicle transport. This will also be facilitated by the recently opened pedestrian tunnel under Peace Prospect, the entrance to which is situated directly at the exit from the subway.

While walking up or down the convenient, broad stairway, you turn your attention to the picturesque finish of colored mosaics along the upper parts of the subway passageway's entrance and exit. The corridor walls are also decorated with colorful, mosaic-type, inserted posters dealing with themes of the Olympic sports events. By its form the passageway, as it were, puts you in the mood for viewing the opening panorama of the complex of the enclosed stadium and the swimming pool. The designers' group has carefully thought out the arrangement of all the units of the complex so that the spectator should obtain several views of the complex from the most picturesque and attractive sides.

The austere stadium building with its sports arena, resembling the form of an ellipse rises to its full height and freezes to the rear on a raised area--

the podium. Its architectural appearance defines the evenly repeating rhythm of the external, enclosure components, creating the impression of a finely traced colonnade extended throughout the entire perimeter of the structure.

Having unleashed a socialist competition, the builders are achieving a high degree of quality in the operations which are being carried out. At the construction site you feel the intense creative ardor of the people and their sense of responsibility for the work entrusted to them.

L. Shul'man, manager of Mosstroy Trust No. 8, states:

"In September we completed the erection of the steel and reinforced concrete components, and in October--the installation of the ventilation chambers, the electrical engineering equipment, and the communications lines. Next, we shall turn on the heat with the permanent system so that the builders will be able to carry on their interior finishing work under the best possible conditions."

As is well known, the enclosed stadium building is divided into zones. The first zone--the central one--with the arena, the stands, and auxiliary areas, is intended for the spectators and guests. The next zone encompasses the vestibule, cloak-room, a lobby for the spectators, the press center, and public eating enterprises. We must say here that these enterprises (a restaurant with 400 seats, a coffee shop with 450 seats, a cafeteria with 140 seats, a snack bar with 120 seats, and a press bar with 50 seats) will serve not only buffets for the stadium and the swimming pool but will also work for the city.

Further on there are two sports training zones, located in the podium area. Both these zones are being built with consideration given to the arena's conversion.

And, finally the zone adjacent to the passageway under the podium, contains storage and technical areas.

But the main thing in the stadium building is its arena, which is 120 X 86 meters in size, with an apparatus for freezing ice on an area of 72 X 112 meters; it also has an extension-type, acoustical barrier, consisting of 26 panels, which are stored in safes along the ends of the arena. When required, these panels are moved out and divide the hall along its axis.

The swimming pool has already assumed its contours; it is also being created on the podium, but on a level which is scarcely lower than the stadium's main structure.

Under a single roof structure, formed by two, inclined, 12-meter arches, are located two demonstration pools for swimming and diving from permanent and temporary diving towers.

For the first time in the experience of Olympic competition pools and stands will be separated from each other by a glass, acoustical partition in order that competitions in two events can be held at the same time. There is also a children's swimming pool, with two small pools 12.5 X 9 meters in size, another small pool 25 X 14 meters in size, and a gymnastics hall.

These pools, executed in monolithic, reinforced concrete structural components, have been built in accordance with the standardized solutions of Soyuzsportproyekt's designers.

A. Kiselev, deputy manager of Mosstroy Trust No. 28, states:

"We have completed the erection of the swimming pool's structural components. The building stands under its roof, and we are preparing for winter. Finishing operations are proceeding along a broad front. A number of areas are ready to be turned over for outfitting with equipment. Work has begun on an extremely complex and important phase--the installation of the heart, one could say, of our project--the pool's pumping and filtration station."

Taking part in the work on the unique structure, one of the principal Olympic projects, is a large, creative group of architects, engineers, builders, and scientists.

Duplication of Leningrad Prospect

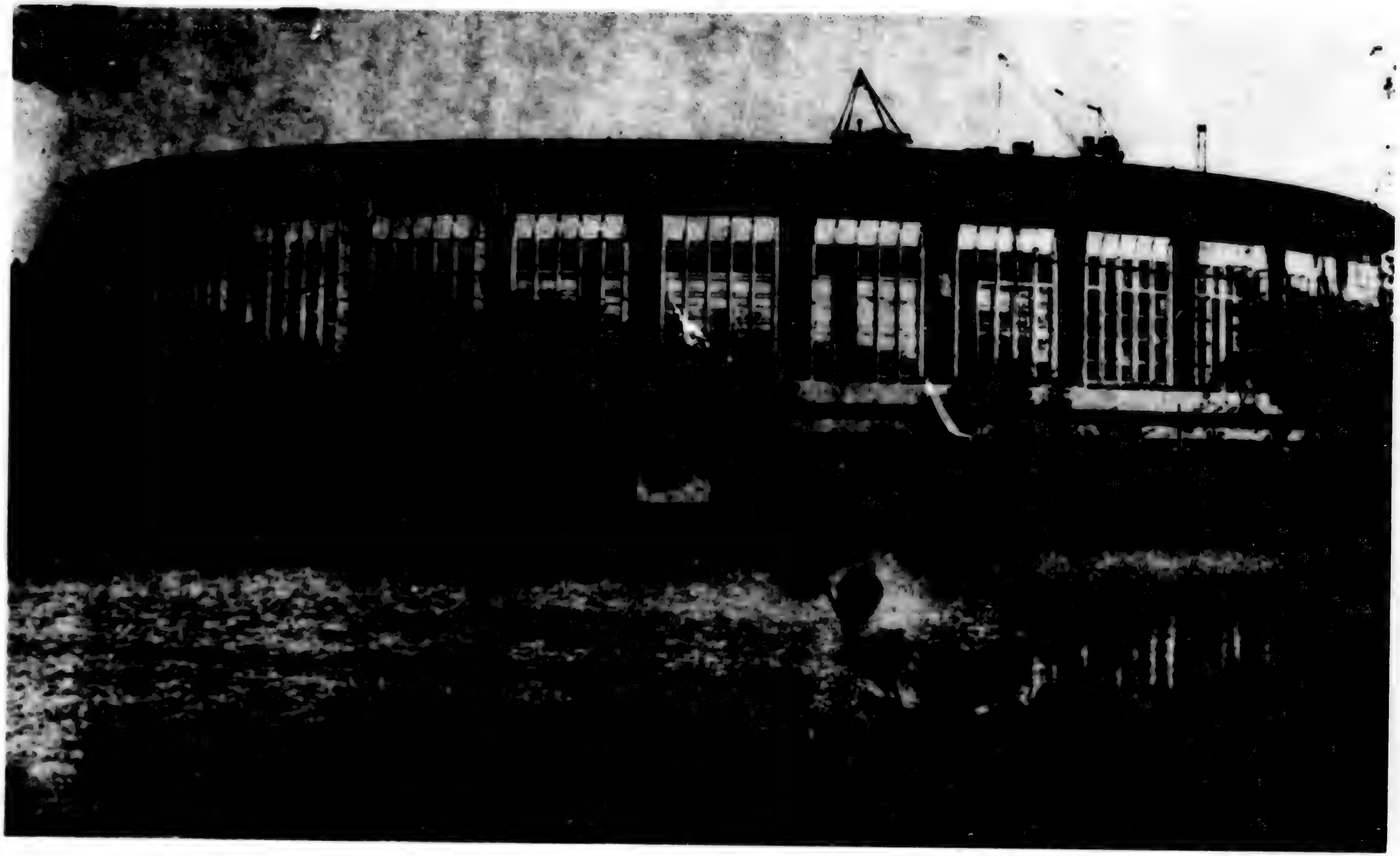
This four-kilometer main route will become, as it were, a duplication of Leningrad Prospect. It stretches from the "Sokol" Subway Station to the First Botkinsk Short Thoroughfare, and it passes by the following major sports facilities: the "Dinamo" and "Young Pioneers" Stadiums, the Palace of Sports and the soccer and track complex of the Central Army Sports Club, as well as by the capital's Central Airport. When the "Olympians" arrive here, buses will take them along the new, well-laid-out route.

Leningrad Prospect is one of the few busy arteries in the capital where one-way traffic used to exist. This created considerable transportation difficulties.

Now all this has changed. In accordance with the designers' intentions traffic of public and truck transportation has begun to move in the direction of the city's central section along a newly planned side thoroughfare, which is 15 meters wide. Along the right-hand portion of Leningrad Prospect, which was formerly its central part, public and truck transportation now moves in the direction of the "Sokol" Subway Station. And in the central and left lanes two-way traffic of passenger cars has begun.

All this has significantly increased the Prospect's traffic capacity, and it has solved the problem of transportation for the public buildings which

Page 10: All-purpose sports hall and swimming pool under construction on Peace Prospect.



Page 10: All-purpose sports hall under construction on Peace Prospect.

are located here, as well as for the population. The construction of five underground passageways has begun. By the time the Olympic Games begin passageways will be opened up at the northern vestibule of the "Dinamo" Subway Station, at the airport, and at the "Aeroport" Subway Station.

The main route was planned in Workshop No. 6 of the Mosinzhproyekt Institute. Its authors are Engineers P. Anisimov (the Workshop Director) and G. Kaplan (Chief Plan Engineer).

[112-2384]

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TV-RADIO COMPLEX FOR 1980 OLYMPICS

Moscow NA STROYKAKH ROSSII in Russian No 12, 1979 pp 53-55

[Article by L. Sitnin, chief of the Department of PERT Planning and Organization of Construction Management, Glavmospromstroy: "ASIOR on Construction of TV-Radio Complex"]

[Text] The Ostankino TV-radio complex [OTRK] occupies a special place among the facilities for the 1980 Olympics that are being put up by Glavmospromstroy. This facility is made up of a 7-story main building that accommodates TV and radio studios, a 14-story central commutation tower for processing incoming data and transmitting it to the ether, and a cooling center to provide proper working conditions for a variety of complicated equipment. In combination with the existing TV center, the new TV-radio complex will provide extensive coverage of the Olympic Games for the Soviet people and other nations via the Eurovision and Intervision systems.

The complex is being built by GSMO-1 [State construction and millwright association No 1] of Glavmospromstroy, which is the general contractor. The project also involves thirty other construction and millwright associations and specialized organizations. According to current standards, projects of this kind require five years, but plans call for completing the OTRK in half that time.

For the sake of efficient management of the construction project, PERT models have been used as a basis for setting up a large-scale CPM graph subsequently optimized with respect to a time criterion -- the specified directive deadline. This graph has been the guideline for efficient distribution of the volumes of construction and millwright work, and resources by years in conformity with the assumed technology and capacities of organizations.

In developing this graph, working CPM nets were worked out for the planned year that were corrected every quarter and broken down in accordance with changes in technical documentation and preventive maintenance. In addition, local CPM nets were compiled for specific goals (for example a graph of the installation sequence of engineering equipment by individual rooms).

Not only those responsible for execution of the work, but also all the client's services were involved in working out the CPM graphs. This enabled more precise determination of work duration with consideration of the level of labor productivity achieved on the project and utilization of the experience of putting up the first phase of the TV center.

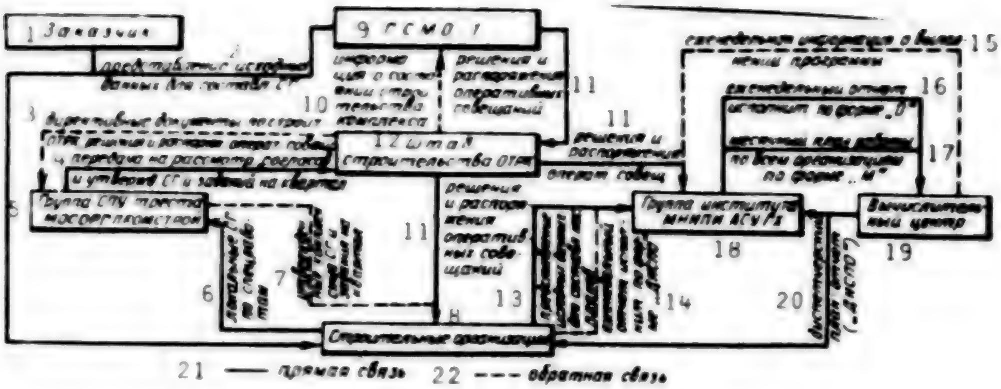
The quarterly CPM graphs and the quarterly assignments to construction organizations based on these graphs were the initial documentation for operational planning and management of the course of construction of the OTRK, which has been carried out with the aid of an ASIOR [automated information support system for management] developed by Orgenergostroy [the All-Union Institute for the Design and Planning of Electric Power Projects] of the USSR Ministry of Power.

Specific jobs that have been handled include the formation of weekly dispatcher report plans for all construction organizations, and informing management of the progress of the production program as a whole on the TV-radio complex with respect to all organizations and types of work in monetary and physical terms.

To handle these jobs, data files have been set up for projects under construction -- "STROB" (list of projects and their codes), those responsible for job execution -- "ISPOL" (list of construction organizations taking part in erection of OTRK facilities), the kinds of work that require supervision -- "VIDRA" and the main data file of the system -- "NEDELYA." The latter file contains all necessary data on the status of work on a project, and provides a check on any combination of indices of the following set: planned and remaining volume, cost of planned and remaining volume, plan for the year and cumulative total from the beginning of the year to date, actual volume accrued from the beginning of the year to date, percent of completion, the quota and the actual volume for the period, percent of completion of the quota for the period.

The GSMO-1 decree on introducing the ASIOR on the Olympic TV-radio complex for each organization defines the parties responsible for timely and reliable presentation of data, the procedure for filling out initial forms and deadlines for transmitting them to the group of Moscow Scientific Research and Design Institute for Automated Control Systems [MNIPI ASU] of municipal services affiliated with the construction staff (this group implements the system) (see the diagram).

The Mosorgpromstroy Trust of Glavmospromstroy worked out the technological documentation for construction of the OTRK, including the CPM graphs. To improve efficacy of compiling these charts, a special CPM group of Mosorgpromstroy has been organized in affiliation with the construction staff with the job of compiling comprehensive large-scale CPM graphs for


1 Заказчик
2
9 ГСМО 1
10
11
3
12 Штаб строительства ОТРК
11
15
16
17
5 Группа СПУ треста Мосоргпромстрой
Группа института МНИПИ АСУГХ
Вычислительный центр
18
19
6
7
11
13
14
20
8 Строительные организации
21 — прямая связь
22 --- обратная связь

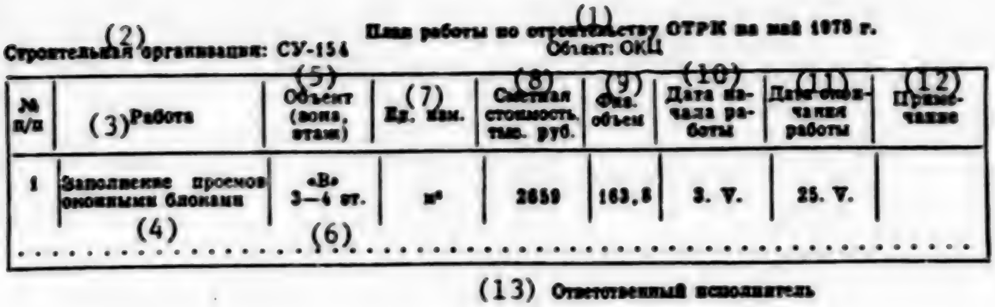
Flowchart of the ASIOR on construction of the Olympic TV-radio complex at Ostankino

KEY: 1--Client
2--presentation of initial data for compiling CPM graphs
3--directive documents on construction of the OTRK, decisions and decrees of operational meetings
4--transmittal of quarterly CPM graphs and quotas for examination, agreement and confirmation
5--CPM group of Mosorgpromstroy Trust
6--local CPM graphs for specific jobs
7--confirmed comprehensive CPM graphs and quarterly quotas
8--Construction organizations
9--GSMO-1
10--information on the status of construction of the complex
11--decisions and decrees of operational meetings
12--OTRK construction staff
13--presentation of initial data for compiling monthly plans
14--daily DISPO report on work completion
15--weekly information on program execution
16--weekly form "O" report on execution
17--monthly work quota on form "M" for all organizations
18--group of the MNIPI ASU of municipal services
19--computing center
20--DISPO dispatcher report plan
21--direct communication
22--feedback

the entire construction period and for the planned year, quarterly correction and breakdown of yearly schedules, and compilation of local special-purpose graphs, and quarterly-montly assignments to construction organizations based on the graphs and plan documentation.

Quarterly graphs and assignments were approved by the staff and transmitted to the group of MNIPI ASU of municipal services and to construction organizations for those responsible for job completion. Job groups

Form "M"



(1) План работы по строительству ОТРК на май 1978 г.

Объект: ОКЦ

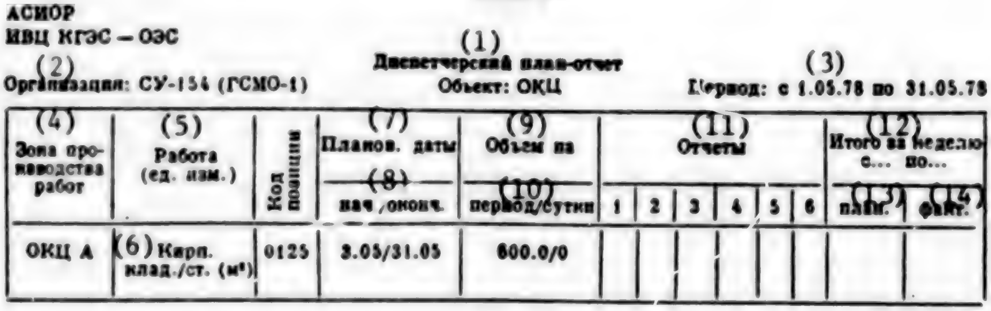
(2) Строительная организация: СУ-154

№ п/п	(3) Работа	(5) Объект (зона, этаж)	(7) Ед. изм.	(8) Сметная стоимость, тыс. руб.	(9) Физ. объем	(10) Дата начала работы	(11) Дата окончания работы	(12) Примечание
1	Заполнение проемов оконными блоками (4)	«В» 3—4 эт. (6)	м²	2659	163,8	3. V.	25. V.	
....								

(13) Ответственный исполнитель

KEY:
1--Work plan on OTRK construction for May 1978. Project: OKTs
2--Construction organization: SU-154
3--Job
4--Window installation
5--Object (zone, story)
6--"V"; 3-4 st.
7--Units of measurement
8--Estimated cost, thous. rub.
9--Physical volume
10--Date work begun
11--Date work completed
12--Comments
13--Person responsible

DISPO



АСИОР
ИВЦ КГЭС — ОЭС

(1) Диспетчерский план-отчет

Объект: ОКЦ

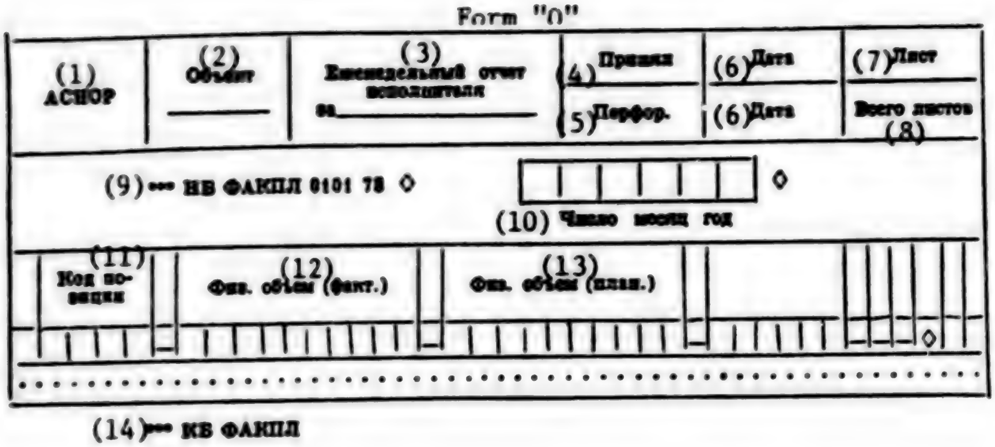
(2) Организация: СУ-154 (ГСМО-1)

(3) Период: с 1.05.78 по 31.05.78

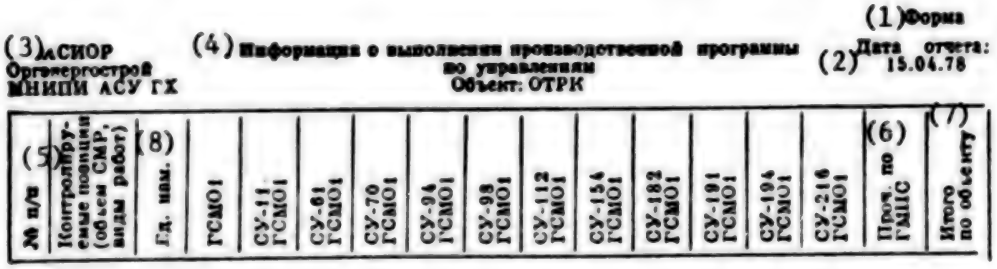
(4) Зона производства работ	(5) Работа (ед. изм.)	Код позиции	(7) Планов. даты	(9) Объем на	(11) Отчеты						(12) Итого за неделю с... по...	
			(8) нач./оконч.	(10) период/сутки	1	2	3	4	5	6	(13) план.	(14) факт.
ОКЦ А	(6) Кирп. клад./ст. (м³)	0125	3.05/31.05	600.0/0								

KEY:
1--Dispatcher report plan. Project: OKTs
2--Organization: SU-154 (GSMO-1)
3--Period: from 1 May 78 through 31 May 78
4--Zone of work execution
5--Job (units of measurement)
6--brick. courses/wall (m^2)
7--Plan dates
8--initial/final
9--Volume per
10--Period/day
11--Reports
12--Total for week from... through...
13--Quota
14--Actual

Form "0"



KEY:
1--ASIOR
2--Project
3--Daily record of executive for
4--Accepted
5--Punched
6--Date
7--Page
8--Total pages
9--***NB FAKPL 0101 78 ◊
10--Day Month Year
11--Position code
12--Physical value (actual)
13--Physical value (plan)
14--***KB FAKPL



KEY:
1--Form
2--Date of Report
3--ASIOR
Orgenergostroy
MNIFI ASU of municipal services
4--Information on completion of production program by administrations. Project: ORTK
5--Monitored positions (work volume, kinds of jobs)
6--Miscellaneous
7--Total for the project
8--units of measurement

СУ--construction administration
ГСМО--State construction and millwright association

for the planned month for each construction organization were compiled in physical and monetary terms on form "M" on the basis of the approved quarterly graphs and assignments in accordance with monthly work plans, deliveries of materials, structural components and items, plans of allocation and movement of construction equipment with consideration of the specific production situation on the project. This compilation was done by the responsible executives. After the information had been checked by the group of MNIPI ASU of municipal services, it was transmitted to the computing center, and used as the basis for preparing dispatcher report plans (DISPOs).

The DISPOs were transmitted to the responsible job executives for a weekly report on the progress of fulfillment of monthly quotas, and to the group of the institute for supervision and coordination of work in accordance with the summary of DISPOs from all executives, and transcription of data to form "O" for computer processing. The latter form was sent to the computing center, and in accordance with programs for machine processing, output data were compiled weekly for operational meetings in accordance with forms completed by builders on completion of the production program over the project as a whole, broken down by construction organizations in physical and monetary terms (form 8).

These data were carefully analyzed by the construction staff, and discussed at weekly operational meetings on ways and means. The decisions and decrees of the operational meetings were made available to the construction organizations and the group of the institute for consideration in working out the DISPO for the next time period.

The ASIOR gives objective and up-to-date information on execution of the program over the entire complex, by separate projects, as well as with respect to all organizations and basic types of jobs. Introduction of the system has enabled systematic supervision over the course of construction of the OTRK, determination of bottlenecks and indication of means for eliminating them, formulation of the optimum job plan for every brigade with respect to job types and volume for the subsequent week compiled with consideration of the control figures of the monthly quota, and has been the basis for coordination with other organizations, providing a work front for colleagues and the planning estimates and technological documentation, required material and technical resources, and also information on the technical status of the project.

At the same time, certain difficulties have arisen with the introduction of the ASIOR. In particular, some responsible job executives have not always had a conscientious attitude to their obligations for filling out the monthly quota form and timely transmittal of information on completed jobs. Due to the fact that the main administrative board has no computing center, and it has been necessary to lease machine time in other organizations, there have been delays in calculations and in presentation of data to the manager of the construction site. The lack of a large-scale dispatcher system on the TV-radio complex has made it impossible to take a day-by-day account of the actual job volumes completed, which has reduced the efficacy of data transmittal.

But despite these isolated deficiencies, the ASIOR system has given a good account of itself and proved its high effectiveness. The building for the television engineering center is already in operation, and all engineering rooms in the building are ready for installation of equipment (some of it has already been tried during the finals of the Seventh Spartan Summer Games of the Soviet Nations). All basic construction and special jobs on the complex have been completed, and the Olympic project is ready for approval by the State Committee. The deadline set by the directive has been met, which to some extent is due to introduction of the ASIOR.

Experience in using the automated operational management system on construction of the TV-radio complex is now being analyzed in detail, and generalized for extension to other construction projects of Glavmospromstroy.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

AIR TERMINAL COMPLEXES OF VNUKOVO AND SHEREMET'YEVO

Moscow NA STROYKAKH ROSSII in Russian No 11, 1979 pp 52-55

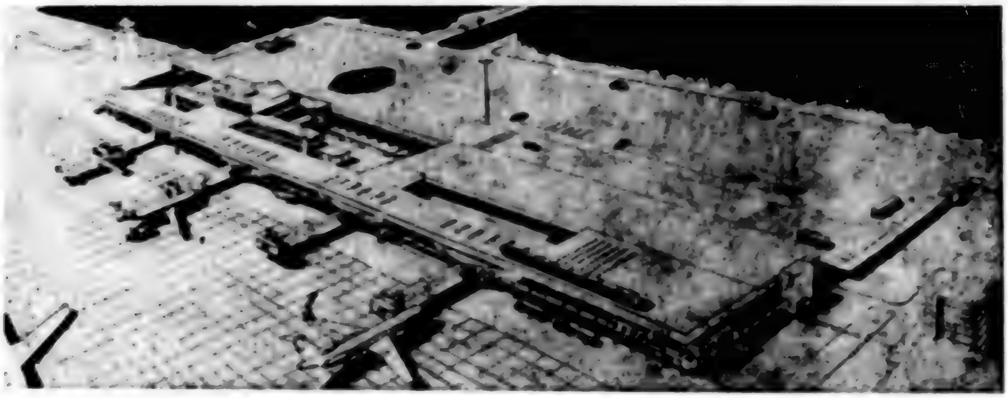
[Article by V. Yermolayev, chief architect, Institute of the Central Office for Research, Design and Planning of Airlines and Airports]

[Text] In the summer of 1980 the capital city airports of Vnukovo, Sheremet'yevo, Domodedovo and Bykovo will become the "air gates of the nation" for hundreds of thousands of participants and spectators at the Olympic Games. To deal more successfully with this responsible and honorable task, a lot of work is now in progress at two of these airports -- Vnukovo and Sheremet'yevo: modernization in the former, and construction of a new air terminal in the latter.

The modernization going on at Vnukovo amounts to a radical re-outfitting of the entire complex. Upon completion, there will be an unrecognizable alteration of both the technological essentials and the architectural appearance of the complex. To give an idea of the scale of this reconstruction, suffice it to say that by the end of the project the planned traffic-handling capacity of the airport will reach 4200 passengers per hour in place of the present 1500.

The planners had the difficult job of making a unified whole out of technologically and architecturally disparate structures, and the construction had to be done without interrupting service of the existing facilities. Starting from these conditions, the main thrust of reconstruction was formulated: putting up a new two-story building on the airfield side of the complex to cover and "embrace" all existing spaces with façades of plastic structure with alternating glassed-in and protruding blind surfaces covered by a cantilevered roof; on the air terminal side, in virtue of its limited size, the design calls for only an extended overhang.

The need for a considerable increase in the traffic-handling capacity of the existing airport has made it necessary to use more flexible technology, which is achieved by setting up a zone for simplified servicing of passengers leaving on large-capacity aircraft, and organizing boarding



Air terminal complex of Vnukovo Airport (perspective drawing)

from the second level of the air terminal, using telescoping boarding tunnels.

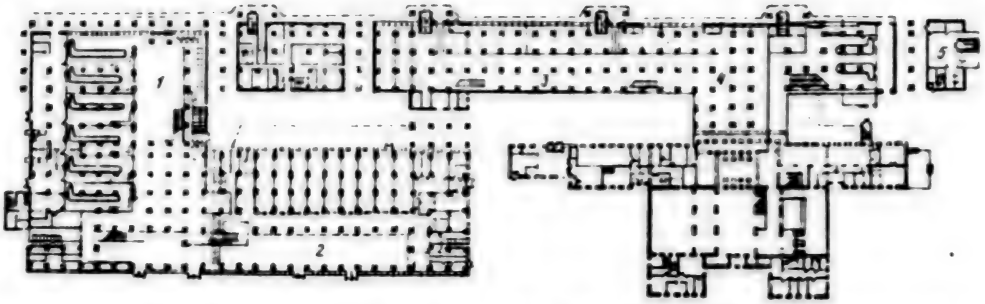
The plans call for expanding the incoming passenger area with a baggage department equipped with carousel conveyers to shorten the time of this operation. The area will contain an information desk, reservation counters, dispatcher service, post office, currency exchange bank and so on. A storage area in the basement will accommodate 10,000 units of luggage.

Clear graphic information is being planned in the form of pictograms, directories, and automatic display boards, which will considerably facilitate orientation of passengers and shorten their stay in the airport.

The complex will include sectors for servicing intourists and deputies, with a set of accommodations for additional services -- lounges, cafeterias, "Berëzka" shops.

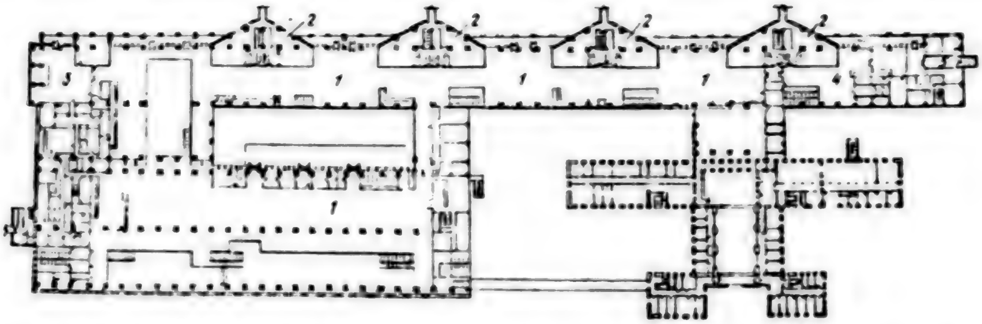
The building is to be constructed with a prefabricated reinforced concrete shell with column spacing of 6 x 6 m on the first floor, and 6 x 18 m on the second floor. The footings are shell type reinforced concrete in monolithic forms. The 18-metre spans will be covered by gabled beams. The roofing and floor plates will be ribbed prefabricated reinforced concrete structures.

Anodized aluminum will be the main material for the facing on the airfield side. The combination of blue-green roof and beige walls and imposts of the glass panels will give the structure originality and attractiveness. The interior will feature wide use of materials such as marble, granite, anodized aluminum, hardwood veneer panels and so on. Works of decorative monumental art will enrich and enhance the interior.



First floor plan: 1--arrival area; 2--departure area; 3--area for registration on IL-18 aircraft; 4--"Inturist" sector; 5--deputy area

Second floor plan: 1--waiting areas; 2--boarding areas; 3--resaurant; 4--"Inturist" sector; 5--deputy area



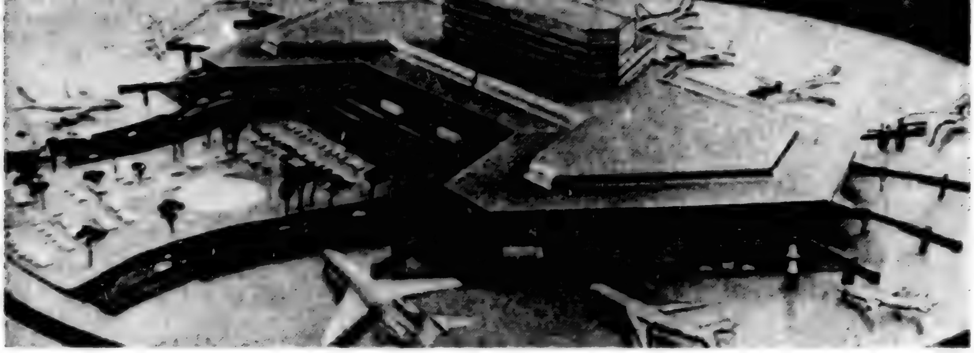
In the terminal area there will be cours d'honneur with flowers and small architectural forms as an auxiliary waiting area in the summer months.

The reconstruction project has been worked out by a planning collective at the Institute of the Office for Research, Design and Planning of Airlines and Airports [Aeroproyekt] headed by architects I. Artamonova, A. Zakharova, and designers V. Balabanov, Z. Senicheva and A. Molchanov.

The general contracting trust Mosstroy-29 of Glavmosstroy has already erected the building, and is now doing the finishing work.

Sheremet'yevo-2 is a new air terminal complex that will handle the main passenger traffic during the 1980 Olympics. Its handling capacity of 2100 passengers per hour will take care of more than 6 million flights per year. The complex has a working area of 85,000 sq. m and a volume of 570,000 cu. m. The design and construction are being handled by the Rüterbau Company of the Salzgitter enterprises, West Germany, with the cooperation of Aeroproyekt specialists.

The air terminal is located in the picturesque woods along Leningrad Highway. The concern for maximum conservation of natural greenery had its effect on the compact design of the complex with an eight-story structure in the center. Architecture is simple and economic.



New Sheremet'yevo-2 air terminal complex (model)

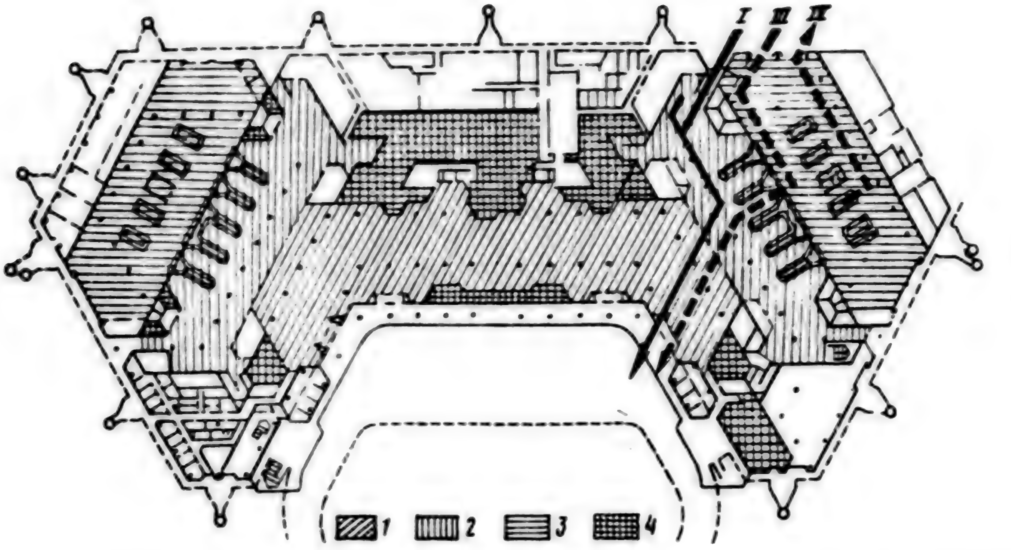
Technology is on a high modern level. Efficient and convenient equipment will assist personnel in expeditious and comfortable processing of passengers on all stages -- from municipal transport to the airplane, and also on the return trip. This equipment includes self-opening doors, automatic electronic luggage scales, facilities for baggage checking, automatic display boards that inform passengers and those meeting them of flight schedules, and so on.

Nineteen large air liners can be accommodated directly at the terminal, and twelve more can be handled at a nearby platform.

The two-level layout used in the planning completely eliminates intersection of passenger streams both within the terminal and in the outside area. Departing passengers will be delivered by buses and cabs over a transport bridge to the second level where they will be able to get directions in a distribution vestibule from which they will go to the baggage checking area and ticket registration counter, and from there to waiting areas where lounges, cafeterias, restaurants, convenience shops, movies and so on will be at their disposal. The dining facilities can handle 1200 people at a time. The arrival area is located on the first floor in direct proximity to the boarding areas and municipal transport facilities. Nearby are the baggage pickup lines, light and convenient luggage caddies, a currency exchange bank and a multipurpose information center. Not far away is a hotel for 500 guests.

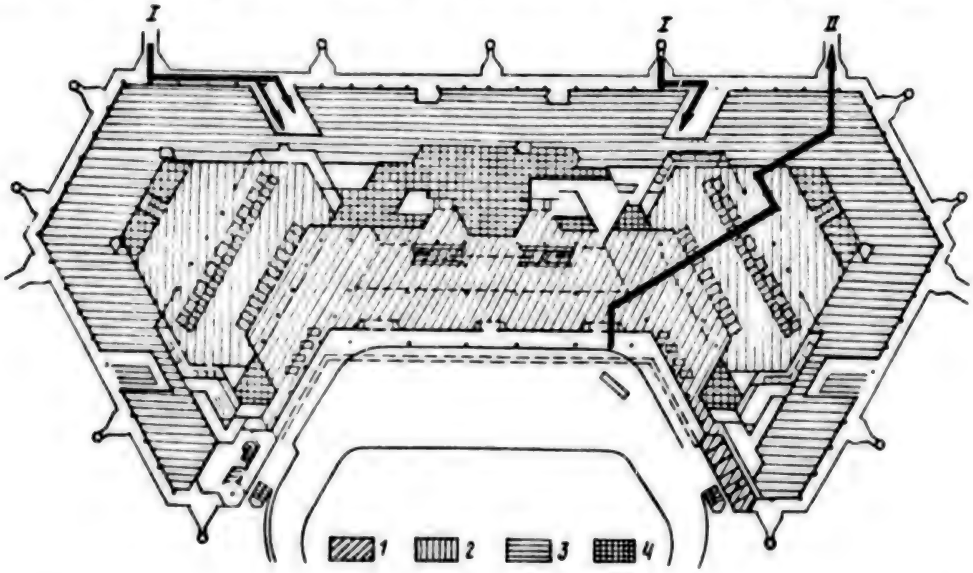
The third floor is reserved mainly for transit passengers with just about every kind of additional service, where they can rest comfortably while waiting for their flight. The fourth floor has flight steward quarters and a dining hall. The fifth floor is intended for restaurants, lounges and business meeting offices. The service, engineering and utility rooms are on the sixth, seventh and eighth floors.

The construction is based on a braced metallic famework. The footings are monlithic M-250 concrete 110 cm thick. The main column grids are



First floor plan: 1--arrival area; 2--baggage pickup area; 3--baggage department; 4--additional service area. The arrows show: I--route of incoming passengers; III--route of luggage of incoming passengers; IV--route of baggage of departing passengers

Second floor plan: 1--departure area; 2--passenger preparation area; 3--waiting area; 4--auxiliary service areas. The aroows show: I--routes of arriving passengers; II--route of departing passengers



9.12 x 15.8, 9.12 x 7.9, 9.12 x 31.6 and 18.24 x 15.8 m. The floors between stories are monolithic with a stamped metal surface. A girder ceiling with a span of 32 m is planned over the passenger registration building. The enclosures will be bronze anodized aluminum panels with tinted glass combined with darker brown anodized aluminum panels.

The interiors will make extensive use of contemporary materials such as plastic, aluminum, stained glass, granite and so on.

The well-appointed area surrounding the terminal with lots of parking areas and a transport platform where airline passengers will be brought by cab and bus to the second level will be adorned with a decorative fountain and flagpoles.

Finishing work and installation of equipment is now in progress in the building.

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CONSTRUCTION, CONSTRUCTION MACHINERY,AND BUILDING MATERIALS

INTOURIST PREPARES FOR OLYMPICS

Moscow GORODSKOYE KHOZYAYSTO MOSKVY in Russian No 11, 1979 pp 31-32

[Article by P. Z. Gus'kov, deputy director of the Main Administration for Foreign Tourism under the USSR Council of Ministers: "Welcome to Moscow"]

[Text] Each day draws us nearer to the significant date when the Olympic flame will blaze up over Central Stadium imeni V. I. Lenin in Luzhin. Moscow is preparing to become a hospitable and cordial host for this great international sporting event which, for the first time in the history of the Olympic movement, will be held in a land with a socialist government. Hundreds of thousands of sportsmen, referees, journalists and guests will stay in our capital. Therefore, in Moscow as well as in other Olympic cities, much has been done to organize the work of such an immense international forum.

The Games involve Intourist a great deal: its people--translators, reviewers and inspectors--and its service industries--hotels, restaurants, campgrounds and motels which essentially comprise an organic component part of the general urban economy of the capital. During the days of the Olympiad foreign guests will be received in much larger numbers than usual and all of them must be given the necessary conveniences and comfort, the chance to acquaint themselves with the achievements of the Soviet people in the construction of communism and the development of science, technology, culture and art. Moscow city organizations are doing much so that we might successfully cope with such important tasks. A large number of people, engaged in various sectors of industry and spheres of service for the city, are taking an active part in this work.

We will now devote our main attention to accommodating tourists and guests, organizing meals, providing transportation services, improving excursions and measures for conducting cultural performances.

At present there are about 70 hotels in Moscow which may simultaneously receive more than 50,000 people. The larger and more popular among foreign tourists are: the "Natsional," "Metropol'," "Inturist," "Belgrad," "Moskva," "Rossiya," "Ukraina," "Leningradskaya," and others. These hotels are well equipped and meet modern demands. Inside are cozy rooms with all the conveniences, first class restaurants and bars, assorted kiosks and communication sections, rental offices, and everyday services.

However, the material base in Moscow and other Olympic cities is not sufficient to accept such a huge number of tourists and guests during the period of the Games. Thus, by the beginning of the Olympiad the number of spaces in hotels will have been almost doubled. In Moscow, Tallin, Leningrad, Kiev, and Minsk construction of new hotels, motels and campgrounds is being completed and many dormitories are also being put in order and their equipment is being refurbished.

An important condition for irreproachable service to tourists is the organization of meals. This brings to mind a wonderful Russian proverb: "Bread is everyone's main concern." Intourist and the Chief Administration for Public Dining under the Moscow gorispolkom have done much in this area. There is an organization which provides tourists with three meals a day and serves drinks and cold snacks. There will be bars and cafes in the lobbys of the hotels which are already in operation. In addition, new ones will be built and existing public eating enterprises will be reconstructed and outfitted with more modern equipment. In Moscow it is projected that in all, 110 new permanent and temporary public eating enterprises will be put into operation and 150 enterprises that are located near Olympic sites and places where tourists stay will be reconstructed. Many of these enterprises reflect in their menu the special features of the national cuisine of union and autonomous republics. Without a doubt the age-old Russian dishes-rasstegai, fish soup, blini, okroshka, and dumplings--will be a success.

Public dining is being organized in the required manner at airports, river and sea ports, at railroad stations, and along the travel routes for all forms of transportation. A general food enterprise with 3,000 seats will be built on the Olympic high-speed highway alone. All things considered, all of this gives a basis for believing that guests will be received with the cordiality and generosity traditional for our country.

In addition to Intourist, the corresponding subdivisions of Moscow's gorispolkom are carrying out measures which have been contemplated. Road and transport organizations are conducting a large amount of work. Reconstruction, repair and widening of sections of thoroughfares is going on. Complementary construction is being carried out along highways: filling stations, service stations, rest areas and public eating enterprises. At the present time questions pertaining to the apportionment of motor transport for foreign guests who come to Moscow and other Olympic cities have already been decided.

During the Olympiad-80 period guests will be given wide opportunities for familiarizing themselves with the Soviet people and with their achievements in the construction of communism, in the fields of science and technology and in the growth of socialist culture. The principal site which will be shown to tourists will be the capital of our homeland, Moscow, with its Red Square and Kremlin buildings, other architectural ensembles, many museums and theaters. But Intourist's itinerary, the total length of which comprises about 12,000 km, passes through almost 140 cities. Therefore, the transportation ministry and departments must provide efficient transportation for tourists along international and internal routes.

Much is being done in this matter. Thus, the Ministry of Railroads is reconstructing the Leningrad terminal in Moscow, developing charts for train movement by calculating the increase in passenger traffic particularly from Moscow to the Olympic cities and is providing an increase in train traffic in the direction of Warsaw, Berlin, Paris, Prague, Budapest, Belgrade, Bucharest, Sofia and Helsinki.

The Ministry of Civil Aviation is completing construction of the Sheremet'yevo-2 airport and a hotel with accommodations for 500, modernizing the Vnukovo and Domodedovo airports in Moscow, reconstructing the airport in Minsk, and proposes to use the new IL-86 and YaK-42 airplanes on international and internal routes.

The Ministry of the RSFSR River Fleet is improving riverside stations in Moscow and other cities. About 80 motor boats and launches will be placed at their disposal for transporting tourists and for tourist trips.

During periods of travel, various trips and excursions, tourists will have many opportunities to obtain a wide assortment of Olympic souvenirs. Well known artists, famous masters and skilled craftsmen are working on their creation and production. Briefly speaking, our guests will be able to obtain interesting presents which have no equal anywhere, and which will remind them for a long time of their stay in Moscow and other cities of our homeland during the 1980 Olympiad.

Finally it would be impossible not to say something about the broad cultural program for the games which is intended to last for many months. It began 1 July 1979 during the USSR People's Spartakiad . Those 16 days in July-August 1980, when the sports contests of the Olympic Games will take place, occupy a prominent pace in it.

Much has already been said about the content of the cultural program. Only one portion of it should be singled out: the measures to be carried out that to a great extent will be dependent on city services. These are the organizations of dramatic presentations, mass festivals, attractions, the widest assortment of concerts, brass band parades, carnivals and cavalcades, the participants being professional and amateur collectives. City cultural gardens and parks, streets and squares will be used for these purposes and must be put into perfect order.

Thus, everything is being done in order that the Olympiad-80 will go down in history, not only as a distinguished sporting event, but also as an unforgettable cultural holiday personifying the humanistic concept of our society.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

NEW TOURIST ACCOMMODATIONS IN USSR

Moscow NA STROYKAKH ROSSII in Russian No 12, 1979 pp 30-35

[Article by R. Gvozdev, director of Shop No 7: "The 'Solnechnyy' Motel with Campsites to Accommodate 950 on the Warsaw Highway"]

[Text] On the approach to Moscow along the Warsaw Highway near Mikhaylovskoye Village a service area without equal in Soviet practice is being set up -- the "Solnechnyy" motel and campsite complex to accommodate 950 travelers. The first guests will be participants and foreign tourists at the 1980 Olympics.

Since the highway and the interchange with the Moscow Beltway are now at the limit for traffic handling capacity, a new interchange is now under construction according to plans developed by the Soyuzdorproyekt Institute [State Institute for Highway Design, Planning and Research] that will provide access to these throughways on three levels. Reconstruction is also in progress on the Warsaw Highway itself, and on building a new Simferopol'skoye road.

The section chosen for the complex has an area of 11.5 ha with a steep grade (14 m) in the southwesterly direction located to the southeast of the present interchange and a motel with accommodations for 230, and is at least 150 m from all roads. The new complex will include:

a ten-story motor inn for 402 with outside attended parking lot for 180 cars and indoor parking for 16 cars under part of the building;

two separate two-story motels for 48 persons with units for 2-3 and heated garages on the lower level;

a camping area built on terraces created by the grade of the terrain, including a service area with parking for 56 vehicles, and heated two-person and three-person cabins to accommodate 240 with carports next to the living quarters;

a tent city for 134 persons (each tent designed for 3-4) with electric lighting, parking, and a pavillion with toilets and showers;

an area for trailers, campers and vans with 126 sites equipped with outlets for electricity, water and disposal.

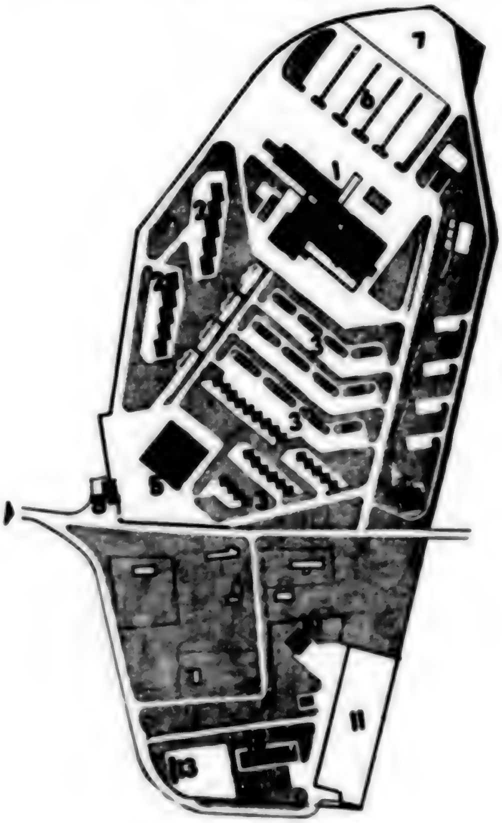
Thus the future service area offers the traveler a wide range of conveniences.

To the west on the approach to the fenced-in camping area is a checkpoint. The lowest, southern part of the section is reserved for the upkeep and maintenance area including a boiler house, cleaning facilities, a health center and a large warehouse.

The ten-story motor inn that constitutes the central facility of the complex is situated at the highest point. It consists of two unaligned sections joined in the vicinity of the elevator shaft, and resting partly on a developed one-level stylobate. A concert hall and motion picture theater is adjacent to the southwest façade of the building.

Plan of the Solnechnyy 950-place motel and campsite at Mikhaylovskoye:

1--motor inn; 2--motels; 3--camping area; 4--tent city; 5--public service area; 6--parking; 7--sites for trailers, campers and vans; 8--checkpoint; 9--medical service; 10--dispensary; 11--warehouse; 12--boiler house; 13--cleaning facilities



The living area has a stepped profile with terraces at the ends of the steps giving the building a memorable shape. On top will be a neon sign in two languages. The elevated site of the building and the sign at an elevation of +40 m will ensure good visibility of the motel and campsite complex from a great distance.

Interchange on the Warsaw Highway at the crossing with the Moscow Beltway in the vicinity of the motel and campsite complex

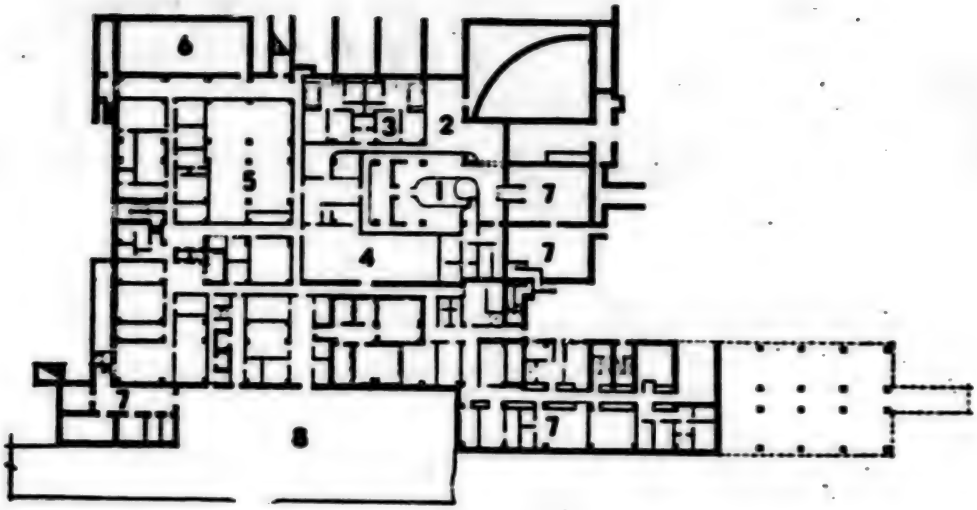
The ground floor of the motor inn is the developed stylobate part. The plan is designed for traffic flow straight through from the main vestibule to the exit to the campsite area; service rooms are placed to both sides of this passageway. The double vestibule contains administration, bellboy service, post office, telephone, rest area, Berëzka shop, service center and entrances to the cafeteria, restaurant and elevators.

The foyer of the concert hall and motion picture theater is connected by a wide stairway to the rooms of the lower level with a nightclub for fifty people, a game arcade, lounges, steam baths, and also a dining hall for the staff, technical services, utility rooms and storerooms served by an underground platform with curved ramp parallel to the approach road.

The second floor will accommodate customer service offices, hairdresser shops, the hotel manager's offices, medical service, rooms of social organizations, business offices and utility rooms.

The 218 comfortable motel rooms will be located on the remaining seven floors of the building with toilets, baths, built-in closets and modern furniture. Two of the units will be double rooms with area of 28.7 sq. m each, while the remaining accommodations will be one-room units: single-occupancy with area of 11 sq. m, and double-occupancy with area of 14 sq. m.

The corridors are 1.6 m wide. One way leads to the elevators, and the other way leads to an open terrace with chaises longues, flower boxes and so on. All terraces look out on the Moscow suburbs in the distance, new housing developments and the main roads of the capital city.

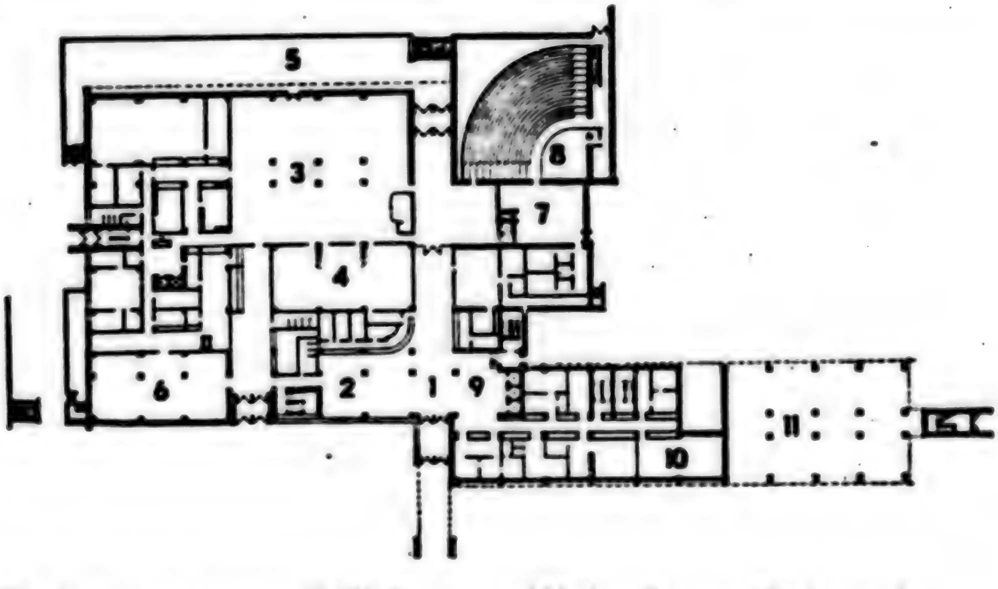


Plan of the lower level of the motor inn:

1--night club; 2--game arcade; 3--steam baths; 4--staff dining room; 5--utility rooms of the kitchen unit; 6--cold storage; 7--maintenance rooms; 8--loading dock

Plan of the ground floor of the motor inn:

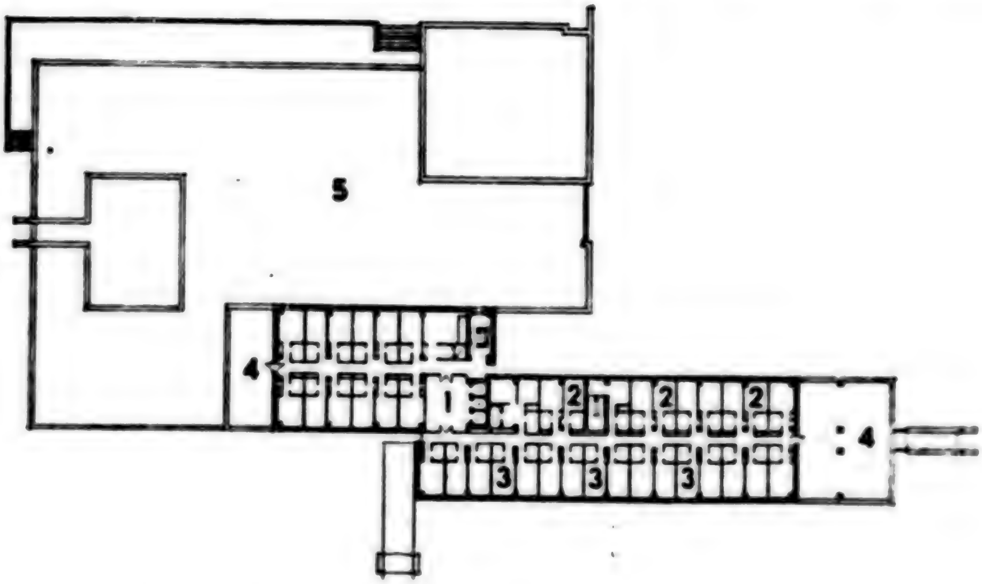
1--vestibule; 2--bellboy service; 3--restaurant; 4--banquet rooms; 5--patio; 6--cafeteria; 7--foyer; 8--concert hall and motion picture theater; 9--elevator area; 10--administrative and business offices; 11--parking



The 400-place restaurant hall has an additional area that can be divided by movable walls into three banquet rooms for 50 diners each. Provisions are also made for a stage and a theater room. Crystal luminaries project the lighting from the centers of caissons in the ceiling.

A wide terrace for the guests during warm weather is adjacent to the restaurant on the side of the campsite area.

The 350-place concert hall and motion picture theater is set off as an independent space 12 m in height by southwest façade. The seating arrangement is semicircular with a steep slope toward the stage, placed diagonally in a circumscribed square. This will be a multipurpose area for stage plays, scientific lectures and presentations, symposiums, conferences and so on. The auditorium is equipped with a projection room and a system for simultaneous translation of speeches in three languages.



Typical floor plan of the motor inn:

1--elevator area; 2--single-occupancy units; 3--double-occupancy units; 4--terraces; 5--roof of the ground floor

The motor inn building is designed around the KMS-101 Moscow framing with column spacing of 6.6 m along the façade, and 3-6-3 m in the longitudinal direction. The enclosing keramzit-concrete panels have vertical fluting and a protective outer layer of white concrete. Plastic art is added to the façade by MPD keramzit-concrete panels placed under the windows of the motel units on these panels.

The window sashes of the room units are aluminum and wood construction. The glass panels of the ground floor and the vertical glass panels of the stairwells are held in dark bronze anodized aluminum sashes.

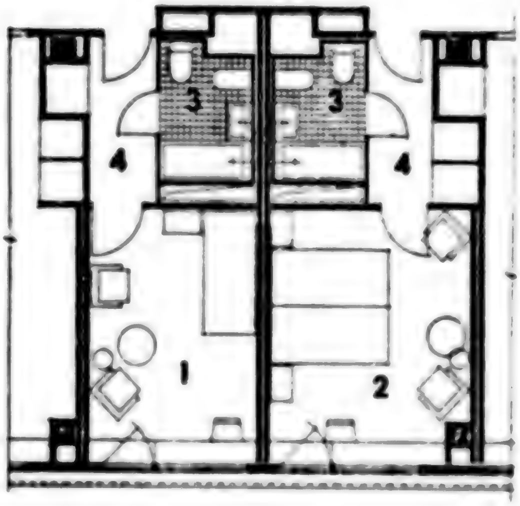
The ground floor rooms and also elements of the stairs and the main entry as well as the walls of the auditorium are of brick with Crimean limestone facing.

Inclined surfaces are used in all open spaces on the ground floor, which creates a certain vertical dynamic and enhances the plasticity of the parts of the building made in the framework.

The main entry to the motor inn, which is located on the northeast side, is accentuated by an extended overhand 18 m long fastened to a trapezoidal support 12 m high. This entryway is convenient for passengers getting out of cars and buses in any kind of weather.

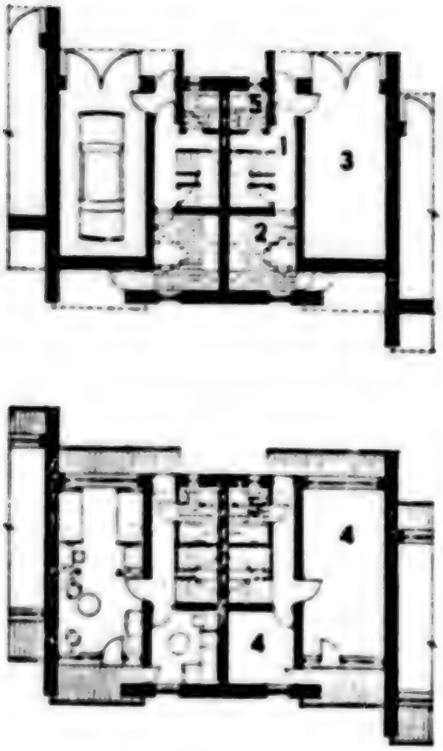
The patio awnings, covering of the main entryway, outdoor seating of the restaurant and inside parking area under the building are made from aluminum structural shapes covered with hard gold-brown enamel.

The cooling tower for the air conditioning system is ornamentally made and placed in front of the main façade of the motor inn. The artistic elements of the building include relief work in the corner of the auditorium; a mural of Moscow in the vestibule near the elevator area on the ground floor; a mural of "Russian Winter" in the main part of the vestibule; appointments of the banquet rooms and so on.



Plan of room units of the motor inn: 1--single-occupancy; 2--double-occupancy; 3--toilet; 4--entry

Modern materials are extensively used for finishing the interior of the motor inn. The columns and walls of the vestibule and restaurant rooms, auditorium, night club and game arcades are faced with travertine; the suspended ceilings are acmigran, and in the main part of the vestibule and the rest [illegible] imitation wooden beams faced with polyform plates and mahogany veneer panels. The ceiling in the night club is of aluminum lath with built-in lighting. The floors in the vestibule are white marble, and in the other rooms the floor covering is parquet or carpeting.



Floor plan of a room unit in the two-story motel: 1--entry; 2--kitchen; 3--garage; 4--living quarters; 5--toilet

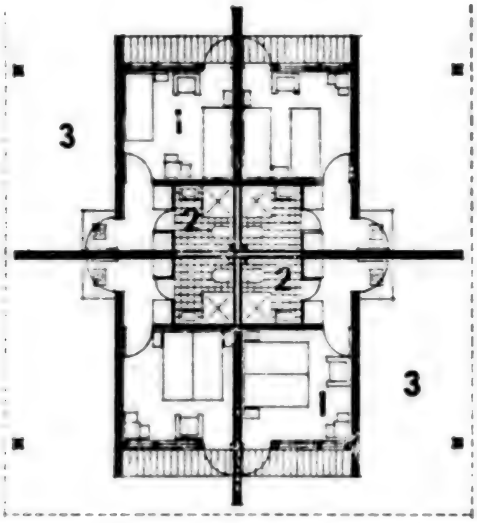
The top plan is for the ground floor, and the bottom shows the plan for the second floor

The corridor walls in the room unit section are faced with aluminum panels with dark bronze anodizing and filled with asbestos-cement sheets with a decorative layer simulating "Anatolian nut." Hidden behind the panels are various items of engineering equipment. The entries to the motel rooms are framed with ash-veneered panels.

The furniture for the living quarters, restaurant, cafeteria, and also the wall facing panels, developed by the Gauyya Association in Riga, are furnished by the Valmiyera Furniture Combine; the furniture for the halls of the vestibule, the administrative and business offices is furnished by the Inter'yer Association with items from Moldavian, Ukrainian and Moscow enterprises. The auditorium seats are covered in navy blue, and the lounging furniture of the night club is covered with bright red that goes beautifully with the wooden elements of dark oak.

The twenty room units of the 48-place motel are located in two blocks of ten each on natural terraces. A block is made up of five sections with two units in a section. On the ground floor is a heated garage, a vestibule, a toilet, and a kitchen with equipment. The wooden stair leads from the vestibule to the second floor with two rooms -- 8 and 19.5 sq. m with a toilet and balconies going out on both sides of the motel. The large room can be divided by a movable wall into a living room and bedroom. The motels are built from ceramic facing brick, and the balcony enclosures and awnings are covered with limestone.

The 240 camping accommodations are situated in picturesque separate cabins of wooden frame construction with efficient heating finished with wood paneling, asbestos-cement sheet, with a dark wooden attic and equipped with a water heating system. Twelve of them are blocked in units of four for two occupants each, and twenty-four are blocked in units of two for three occupants. Next to the cabin is a carport. The units are equipped with hot and cold running water and a toilet with shower. Each has a small balcony for relaxation. The walls are painted and the bathrooms are tiled. The cabins are being made and set up at our order by the Polish Budimpex Company.



Floor plan of camping cabin: 1--living units for two persons; 2--toilets; 3--carports

The social center for the camping area will be located at the main entrance to the complex. The roof will be a metal grid measuring 36 x 36 m developed by Moscow Architectural Institute with a galvanized profiled metal covering. The structure, supported by columns, will house a 50-place dining hall with snack bars, kitchen and dishwasher, self-service and Kulinariya shops, a renting department, administrative services and toilets. Enclosures will be free-standing glass panels for protection from the wind, or ceramic brick. The floors will be made of breccia, and the steps of granite.

The single-story checkpoint building, consisting of rooms for tourist reception and registration, and waiting rooms, will be made of brick with limestone facing of individual elements of the façade. The steps will be granite.

In the vicinity of the tent city is a sanitary unit with hot and cold running water. Two large groups of showers and toilets will provide normal living conditions for those living in the tents.

In the northern part of the section is an area for 126 vehicles equipped with sleeping facilities -- trailers, campers and vans. The facilities provide the necessary comforts for tourists of this category.

All buildings of the complex are equipped with modern engineering and technical facilities. Three air conditioning systems will be included in the design of the motor inn: for the halls of the restaurant, cafeteria and night club; for the hot departments and production rooms of the restaurant; for the auditorium. The tourist accommodations will have forced-air ventilation with a humidifier for wintertime, and the other rooms will have conventional mechanical ventilation.

Vertical transport in the main building is handled by three passenger elevators with capacity of 500 kg each, and a freight elevator with capacity of 1000 kg. The dining facilities will be serviced by several small elevators.

The buildings of the motor inn, motels and camping area are protected by an emergency water system for fires with two hydrants. Automation and dispatching provisions are made for the engineering equipment systems, there is a fire warning signal system, and an automatic telephone system for 500 units.

The territory of the campsite is efficiently organized, well lighted, decorated with small architectural forms, and trees have been planted in the rest areas. There will be athletic fields in the vicinity of the tent city. Paths and roads are being planned in conformity with current standards. A detailed planting scheme has been worked out. The approach to the complex will be made from one of the roads of the highway interchange. It will operate on a temporary arrangement until the completion of construction on the new Warsaw Highway in 1980.

The general planner of the complex is the Central Scientific Research Institute for Economic Planning of Commercial and Domestic Buildings and Tourist Complexes. Many parts of the project have been handled by subcontracting Moscow design organizations -- Mosinzhproyekt, the Central Scientific Research Institute for Economic Planning of Engineering Equipment, NIIvodokanalproyekt, and the State Institute for Research, Design and Planning of Communication Facilities (Giprosvyaz').

Space planning of the complex was handled by architects R. Gvozdev, V. SHer, V. Blomerius, L. Orshanskiy, and engineers A. Shinkarevskiy, L. Shurmukhina, Yu. Kazaryan and Ye. Nikolayeva, and in related areas -- engineers A. Dubkina, E. Zhuravleva, A. Veprinskiy, Ye. Kalugin and T. Sakhno.

The estimated cost of construction of the entire complex is placed at 12,153,500 rubles, including 8,121,000 for construction and millwright work. The facility will be put into operation in late 1979.

The construction is being done by SU-93 [construction administration No 93] of GSMO-1 [State construction and millwright association No 1] of Glavmospromstroy (deputy chief of GSMO-1 is V. Izmaylov; chief of

SU-93 is B. Yushkov; the chief of the complex is V. Bulgakov; section chief is A. Bondarenko). Building construction has now been completed on the motor inn, and finishing work is in progress; construction is now under way on the motels and camping area.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

WORK ON TOURIST FACILITIES, 'MIR' SPORTS COMPLEX CONTINUES

Moscow ZHILISHCHNOYE STROITEL'STVO in Russian No 11, 1979 pp 22-23

[Article by V. G. Trofimov, social correspondent for MOSKVA magazine "A Chronicle of Olympic Construction"]

[Text] At one time a plenum of the Moscow city party committee set a task for construction workers--to turn over the Olympic sites in December 1979. It goes without saying that this is not one of the easiest of tasks. A number of structures have no comparison in worldwide construction practice; others, by their technology, have difficult assembly and finish work. Yet all the same Moscow builders are successfully coping with the tasks. Extensive socialist competition at Olympic construction sites has played a large role in this matter.

Take, for example, the Dzerzhin rayon of the capital. There are seven Olympic structures here such as the sports complex of Mir Avenue, the television and radio complex, the new main highway, the Severnyy Way, which was named Olympic Avenue, the "Kosmos" hotel, and a number of others.

At the beginning of last year the USSR raykom and ispolk of the rayon soviet developed and approved a complex plan for construction and reconstruction of the rayon and for putting in order houses and courtyards, commerce enterprises, public eating places, and territories, which border on the Olympic sites.

The Tsentrodorstroy and Mosstroy-31 trusts were the sponsors of the socialist competition. Their collectives offered to complete the erection of the Olympic structures ahead of schedule. This initiative was widely supported not only by Dzerzhin rayon construction workers but also by many other organizations in the capital as well. And now some results may already be summed up. The "Kosmos" hotel has been put into service and equipment is being installed in the new building of the main telephone center on Samarskiy Lane and in the ATS [Automatic Telephone Exchange] on Zvezdnyy Boulevard. The first phase of Olympic Avenue is open for traffic and at the beginning of next year the second phase, between Durov and Trifonovskaya Streets, should be put into operation.

Two studies in the television and radio complex were ready for the Seventh USSR people's Spartakiad. At present installation and assembly of equipment and finish work is going on in the remaining areas.

Today our story is about two Olympic sites in the Dzerzhin rayon of the capital.

The "Kosmos" hotel.

Of the many Olympic hotels, such as the huge hotel complex in Izmaylov, the Dom Turista in Troparev, the "Sputnik" hotel on Dmitrovskiy Highway, and the "Salyut" on Lenin Avenue, the "Kosmos"hotel was the first to be put into service and is already accepting the first guests. The capital's new "Kosmos" hotel received 4 out of a possible 5 stars according to high international standards.

The hotel was designed by the architects of studio No 1 under direction of Mosproyekt-1 and their French colleagues, and was constructed by the French firm "Sefri," which enlisted many construction-assembly firms from France, and Yugoslavian enterprise "Komgray."

Our magazine has already written about the construction of this hotel (see Housing Construction, 1978, No 6). We shall mention some facts. The semicircular 27-story building was built on Mir Avenue and its facade faces the main entrance to the USSR Exhibition of the Achievements of the National Economy. There are 1,777 comfortable, beautifully decorated and furnished rooms designed basically for two people in the hotel. Several restaurants, cafes and bars, which can simultaneously accommodate 4,000 visitors, are at the service of guests. The "Kosmos" offers many services, several stores and kiosks, a swimming pool, gymnasium, bath-house and winter garden.

A large conference hall with 1,000 seats for holding meetings and symposiums is easily transformed into a movie and concert hall. An underground parking garage holds 150 automobiles.

The unusual configuration of the building, its modern forms and decorative stained glass panel details made of aluminum makes the "Kosmos" truly adorn this part of Mir Avenue.

Several words about construction innovations which were used in erecting the hotel building.

The load-bearing areas of the structure were made of monolithic steel reinforced concrete with an aluminum facing. The hung panels with perlite heating ducts on the exterior wall have a thickness of only eight cm. Yet they held up beautifully under the severe test presented by the past winter.

The window openings are enclosed with a unit that has three layers of glass with a vacuum between them. Such windows possess excellent sound insulation qualities and are always dry and clean.

The hotel's control center, set up on the basis of a computer, is of interest. It controls the work of housekeeping and technical services, keeps a record of rooms which are occupied, accounts and cashier operations as well as performing a number of other functions.

The automated electronic switchboard is just as convenient, which provides not only quick and dependable intercity and international telephone service, but also so-called "conference calls," whereby a telephone subscriber may carry on a conversation with several interlocutors who are located in various areas.

It is assumed that during the days of the Olympiad-80 radio and television commentators who come to Moscow will stay in the "Kosmos."

The sports complex on Mir Avenue.

Work is in full swing here. At the unique stadium that holds 45,000 people and is the largest covered stadium in Europe the installation of stands and stained glass panels and the finish work for the training halls is in progress. One of the best crews in the 212th section of Mosstroy-8 trust, headed by a young foreman named S. Malaniniy, is carrying out crucial and very complicated work. They are preparing the foundation for the playing field. Accuracy is particularly required here.

First, bulldozers carefully evened out the si[illegible] Then, after checking the finished level line and smoothing it out, th[illegible] laid the first layer of concrete slab. The next operation is pouring and placing the second layer of slab. Only after this is the artificial surface laid. And each tier on this "layer cake" requires careful adjustment and leveling.

The roof of the stadium is of special interest. In order to install it in due course a 300 ton temporary support was assembled. It is now disassembled and the finished roof of this unique stadium, with a weight of 3,500 tons and an area of approximately 3.5 hectares, is supported only by means of special structures between the interior and exterior collars of the steel membrane. All of this work was completed by specialists of the Second Moscow construction assembly section of the Stal'montazh trust.

The construction workers who are improving the territory surrounding the sports complex have also been busy. Especially great difficulties arose when they came up against the complicated hydrogeological conditions in this part of the capital. The fact of the matter is that at one time small rivers flowed through here and there were lakes and ponds. It was necessary to lower the water level, solidify the ground and construct a drainage system with drainage canals.

Reconstruction of Shepkin Street and other adjoining streets and thoroughfares is going on. The largest underground pedestrian passageway in Moscow on Mir Avenue was put into service. Glavmosinzhstroy construction workers laid it out in record time--in 100 days--with the standard time period being 8 months. The pedestrian passageway connection was constructed at a depth of 6 meters, having a length of 110 meters, a width of 12 meters and 4 exits. Thanks to this efficient structure the pedestrian passageway can simultaneously admit 35,000 people into the covered stadium in the space of an hour and a half during the days of Olympiad-80. The passageway was constructed and erected by construction worker-specialists of the mining passage work trust No 3. During construction of the passageway large scale components with high factory preparedness were widely used.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

PREPARATIONS BEING MADE BY CITY OF VYBORG FOR OLYMPICS

Leningrad STROITEL'STVO ARKHITEKTURA LENINGRADA in Russian No 12, Dec 79 pp 22-23

[Article by O. V. Vasil'ev: "Vyborg Before the Olympics"]

[Text] The Olympic Games are an event which has now extended far beyond the limits of pure sports. They have now acquired social, cultural and political significance. On the one hand, the level of achievements in the field of physical culture and sports today is a measure of the well being and health of the people and of the concern which the state shows its citizens; on the other hand the degree of preparedness for efficiently conducting the competition, the hospitable meeting and service of the many participants and spectators are regarded as the potential material--technical capabilities of the host country, which includes the sphere of modern service and organizations. This is the reason why we are carefully preparing everywhere to conduct the forthcoming Olympiad-80 and especially in those places where it will have a direct impact.

One of these places will be the Karel' isthmus through which busy automobile and railroad routes pass on the way to Leningrad and further to Moscow. For the sportsmen and tourists who will come to the 22nd Olympic Games from Scandinavian countries, the first stop on Soviet soil will be Vyborg. It is obvious that this unique city, both the ancient and new section, will be of interest to visitors from abroad. Excursions will be provided with a tour of V. I. Lenin's house and museum, the park imeni V. I. Lenin, the city library imeni M. I. Kalinin, newly erected rayon buildings as well as the Vyborg castle, the monument to Peter I, the Ratusha building, the Krugloy tower and other sites of the ancient city.

Vyborg residents, as cordial hosts, are preparing in good time for receiving the Olympiad-80 guests. In conformity with the approved plan they are striving to make their city even more comfortable, develop and reinforce the system of services, and provide the streets, squares and gardens with a festive look.

For the past three years more than 400,000 sqaure meters of building facades and 22 kilometers of street lighting lines have been reconditioned in Vyborg and reconstruction of road surfaces with a total area of 146,000 square meters has been carried out. The beginnings have been laid for the artistic-monumental design of the city in the Olympic theme.

In carrying out the plan a contemporary House of Domestic Services, a structure on the main highway of Lenin Avenue, a medical building in the central rayon hospital, and a number of stores, including those that sell souvenirs, have been put into use and several pavilions have been set up. A new filling station was built and the old one reequipped.

After restoration was completed of the Vyborg castle, where the interrayon museum of local lore is located, several other ancient structures have been restored also. A so-called knight's house was recreated which by its exterior appearance and interior furnishings is a reproduction of a 16th and 17th century dwelling of the aristocracy. At present a children's art school is located in this building. The famous Kruglaya tower has undergone reconstruction, the interior of which is furnished as an exotic cafe. Diabase paving of the entire Rynochnaya sqaure is now being completed which gives this territory a unique coloring of antiquity.

A detailed discussion took place at a session of the city soviet of people's deputies, concerning these and other pre-Olympic preparations in Vyborg. Not only were the results of that which has been completed summed up but, most importantly, the ways and means were determined for completing all of the remaining amount of work for the Olympic sites, which are many here.

It is necessary, first of all, to construct a large department store with an area of 2,100 square meters and a restaurant with 447 seats that will be the beginnings of a large public trade center at the end of Lenin Avenue. Unfortunately, this important structure, entrusted to the Glavleningradstroy No 16 trust, through the fault of the contractor and clients--a trade administration and the Ispolkom Lenoblsovet public food service--has been delayed. At this site last year's plans were frustrated and current plans threaten to also break down. Work should be speeded up here as much as possible for without a new modern service complex Vyborg will not be able to fully handle the many guests for the Olympiad-80.

A garage for 200 buses and a first aid station also remain to be built, and here as well the work is lagging behind the projected time schedule; in this case through the fault of the Gkavzapstroy No 50 trust. This contractor has delayed construction of the automatic telephone station building and television relay.

In addition to this it is necessary to resurface the city's central highway and the roads leading from the borders more quickly as well as reconstructing the old Krepostnoy bridge. Only at the latter site have any signs of life been seen recently; an obvious lull was observed at the other sites even during favorable times. During winter, to speak frankly, the difficult paving process is much more complicated and the quality proves to be far from the best as well....

Soon the "Vyborg" hotel will have to undergo reconstruction. A significant amount of repair work is projected for the cultural and health care institutions and for communication and transportation enterprises. Twelve stores and 8 cafeterias should be renovated. The souvenir shop, the premises for which have long ago been vacated, ought to be restocked but the Leningrad firm "Berezka" for some reason is not in any hurry to occupy it.

At the present time restoration of the Ratusha tower, the Chasovoy (clock) tower and the merchant guild house are being restored through the efforts of a special scientific restoration studio. It would be good if the basic work at these sites as well would have proceeded to its maximum completion by next summer.

It is hoped that the municipal services administration will be able to more effectively use the significant means which have been allocated for the artistic and monumental design of Vyborg and that the city production enterprises will also add considerable contributions in this matter. Vyborg residents themselves are obliged to accomplish much--to adorn the city with a mass of flowers and to put courtyard areas as well as the territory surrounding factories into order.

The collective of the Vyborg branch of Lengrazhdanproekt Institute is making energetic efforts to improve the architectural quality of the structures in the new microrayons and the buildings which were erected in the consolidated part of the city. Those architects who may be especially singled out are V. I. Sobolev, who designed in particular the House of Domestic Services and a block along Danilov Street; I. A. Popov, according to whose design the housing unit with the "Almaz" store was built; and A. A. Bobkov and D. P. Fridlyand, who have developed a very interesting public trade center complex (the construction of which has been mentioned herein). But even when keeping to typical housing units Vyborg designers are attempting to use the local topography to good effect in as much a lifelike manner as possible, to construct built-in and built-on areas for buildings and to ingeniously decide the location of the entrances into them.

The pre-Olympic time period is introducing disturbing troubles into the entire life of Vyborg residents. Yet its workers are doing everything possible so that their native city will become even more beautiful and hospitable.

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CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

OLYMPIC CONSTRUCTION IN VARIOUS CITIES REVIEWED

Moscow STROITEL'NAYA GAZETA in Russian 1 Jan 80 p 2

[Article by A. Grabel'nikov: "The Year of the Olympics has Arrived"]

> [Text] Well, the year of the Olympics has arrived. It will become a time of many crucial starts for sportsmen and a finish straightaway for construction workers who are erecting Olympiad-80 sites.

On New Year's Eve we picked up our telephone receiver and dialed

MINSK.

E. Sidoruk, manager of Minskstroy's Trust No 1, came to the phone. "Evgeniy Fedorovich, what good news do you have for readers of STROITEL'NAYA GAZETA?

"Our fifth section has already put the "Raybichi' sports base into use. The finishing work for the riding school and hotel in the "Stayka' sports camp is now going on."

"And at the 'Dinamo' stadium?"

"We are completing the safety rails for the stands, the enclosures are being treated with concrete and we are finishing the commentators' booths, the teletype hall, press center and other quarters."

"Will the stadium be completed in time?"

"Without a doubt. The basic work was completed before New Year's; our finishing workers in P. Zuyenok, V. Khoruzhiy, N. Kuz'min and Ts. Trushkinaya's crews are doing fine work."

We wished the trust's collective success and called

LENINGRAD.

The conversation was conducted with V. Grekovoy, the head of the Olympiad-80 board in the city on the Neva.

"The principal Olympic structure in Leningrad is the stadium imeni Kirov. It is being reconstructed by construction workers of Glavleninigradstroy's 104th trust," he said. "Honestly speaking, we expected better results. The stands, lighting and signal panel are still not ready. We must make up for lost time during the beginning of the Olympic year."

Interesting, but what do the construction workers themselves say? Trust No 104's chief engineer, N. Plotkin, is inclined to be optimistic.

"All of the basic construction-assembly work is completed. The stadium is dressed in a new 'shirt' of waterproof concrete. The press center is ready."

"This means there is no cause for anxiety?"

"Everything will be ready in March!"

We liked the fighting spirit of the chief engineer, but not the schedule for completing the reconstruction. Is it not possible to speed up the pace, comrades in Leningrad? Why, your colleagues from Kiev and Tallin have overtaken you.

A non-member of the staff and one of our paper's correspondents informed the editorial office about the progress of Ukrainian and Estonian construction workers.

KIEV

On New Year's Eve a skeleton steel structure with the emblem of Olympiad-80 was raised over the huge two-tier bowl of the republic's stadium. This means that the basic work of construction and reconstruction has been completed here. The soccer field has been repaired. The spectator stands have reequipped. Lighting towers 80 meters high have been installed.

The Kiev soccer tournament will be attended by approximately 300 jounarlists from many countries of the world. A reporting-information center has been prepared for them and the number of commentators'booths has been increased.

Sportsmen are training in the two-hall pavilion, yet just recently this building was not even here. The small sports arena with two soccer fields also was not here.

"Everything that was outlined for the year prior to the Olympics has been accomplished," V. Grilikhes, head of the Olympiad-80 organizing committee board in Kiev, informed us.

And now let's listen to what is being said by

TALLIN

Once Old Toomas looked down on everything below from the steeple of the ancient town hall. Now all the time he must crane his neck upward more and more.

The new 28-story "Olimpiya" hotel has climbed upwards. The radio-television tower has already shot up very high--314 meters--by means of which the sailboat regatta may be seen thousands of kilometers from Tallin. The new Olympic village awaits guests. Tallin residents like to compare it to a multi-masted ship. Truly, the architecture is completely "maritime" and the sailing sports center elevated above the yacht club is similar to a captain's bridge.

The maritime system, as is well known, has always been famous for such outlandish accuracy or even lustre. This "maritime imprint" is distinctly visible on the elegant buildings of the press-center, covered slips, reataurant, and trade center. Also the city received a gift of magnificent highways.

The main portion of the Olympic structures are being constructed by

MOSCOW

--the capital of Olympiad-80.

It did not prove to be easy to speak with deputy director of Glavmosstory, E. Desyatchikov. The final days of December are the busiest time. But we met just the same.

"Evgeniy Vasil'evich. First of all, tell us about the features of the structures being built by the central board."

"They may be divided into two groups. The first is sports structures: the rowing canal in Krylat, the archery field and the equestrian sports base in Bittsev forest park. Two of them were tested during the Seventh Annual USSR People's Spartakiade. The second group of structures are services for participants and guests of the games. These are the Olympic village, hotel complexes, cafeterias, cafes, restaurants and communication enterprises "

Tell us more in detail about the progress of your principal structure, the Olympic village."

"It is situated on 107 hectares at the end of Michurin Avenue. Thirty-five major structures are being built here with a total volume of more than 1.5 million cubic meters. Eighteen 16-story large panel housing units have been turned over for use; 12,000 sportsmen will be housed in the comfortable 2 and 3 room apartments. In addition to the housing portion an extensive service area has been created here. A state commission works in the cultural center which contains a theater-concert hall with 1,200 seats, 2 movie theaters, a dance hall, library and restaurant. We are thinking of turning over the service center for use in a few days--the department store, milk bar, every day service combine, drugstore, cafeteria with 4,000 seats and 2 cafes."

"And how are affairs getting on with housing for Olympiad guests?"

"The main body of the ZIL Intourist hotel complex in the Volkhonka area has already been put into use. By New Year's the 22-story 'Salyut' hotel at the intersection of Leninskiy and Vernadskiy Prospects will be put into service."

"Five 30-story buildings have sprung up in Izmaylov. In order that the scope of this construction work be better understood, I will say that more than 350,000 cubic meters of ground nad to be worked, 15,000 piles had to be driven, 87,0000 cubic meters of concrete had to be poured, and 22,000 tons of metal articles and 126,000 cubic meters of steel reinforced concrete structures had to be installed."

"Please tell us several words about the people who built all of this."

"We entrusted the Olympic structures to Glavmosstroy's best construction workers. For example, the crew of I. Demin, Hero of Socialist Labor, participated in the construction of the housing portion of the Olympic village. A. Tikhonov's komsomol youth brigade also worked here, and for their excellent work were awarded the Komsomol Central-Committee prized. Mosstroy-31, put together before the start of construction, erected the ZIL hotel complex in Izmaylov and in the Volkhonka area. Thanks to the organizing talents of manager V. Allaverdov this cohesive, efficient collective may be entrusted with the most complicated and crucial buildings."

Construction workers are greeting the new year with a good feeling--the feeling of having done their duty.

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